



DREDGING CORPORATION OF INDIA LIMITED
(A Government of India Undertaking)
'Dredge House'
VISAKHAPATNAM 530 035

PRICE BIDS/ R.S.BOOKLET

**REGISTERED SHIP REPAIR FIRMS
FOR CARRYING OUT SHIP REPAIR WORKS
ON BOARD DCI VESSELS**

**TECH / RS-HO / 504/ 2017-2019
PERIOD OF CONTRACT FROM 2017 TO 2019**

TENDER GTC & WORK SCOPE

ANNEXURE-I



DREDGING CORPORATION OF INDIA LIMITED
(A Government of India Undertaking)
'Dredge House'
VISAKHAPATNAM 530 035

Ref: No. Tech / RS-HO / 504 / 2017-2019

M/S.

Dear Sirs

Sub: Rate Schedule Contract for Ship repairs,
Terms and Conditions, Schedule; I, II, III, for 2017-2019 Reg.

We forward herewith the following Rate Schedule documents for new Contract RS (17-19) valid for the years (2017-2019).

- SCHEDULE – I** : Terms and Conditions for awarding of repair Works on “**cost plus**” basis.
- SCHEDULE – II** : Rates for doing work in stream, double banking and out station (Other than the basic rates quoted)
- SCHEDULE – III** : Details of repair jobs

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NOTE: Work shop has to provide evidence of their expertise/ experience certificates/ work done certificates in the areas of various dredge equipments & systems of Dredgers, to consider and register by DCI in that particular field of items of R.S as above

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SCHEDULE-I
GENERAL TERMS AND CONDITIONS

1. We generally entrust the job to ship repair firms as detailed in Schedule-I, II and III. We have endeavored to the extent possible to give full details of scope of work required in the schedule. Depending on the costs and conditions prevailing at each place, we request you to quote your most competitive rates against each item of repair work mentioned herein.
2. Unless otherwise stated in this document, the costs should include labour, material, tools & tackles, all consumables, incidental items of works, loading, unloading, transportation, profits, taxes, duties and levies and all other expenses that may be required to be incurred to carry out the repairs.
 - 2.1 Liabilities if any on account of statutory acts such as Payment of Wages Act, Minimum Wages Act, Employers Liability Act, Industrial Disputes Act, Provident Fund Act, Compensation under Workmen's Compensations Act and other regulations of both Local and Central Governments or any modifications thereof or any other law relating thereto and rules made there under from time to time shall be to the repair firms account. The repair firm must indemnify the Corporation against all such liabilities.
 - 2.2 Service Tax will be paid extra as per Govt.rules/ reimbursed. (Serv tax /GST will be paid extra as per Govt as applicable)
 - 2.3 Wages shall be paid by the contractor to the workmen directly. The Corporation has no responsibility whatsoever, in this regard.
 - 2.4 Any liability in case of injury to the workmen on board D.C.I dredgers shall be borne by the contractor/ Repair Firm.
 - 2.5 Expenses incurred towards Transportation (for more than 1 Ton), deploying special equipment such as high lift crane, floating crane, crawler crane and barges etc, by the repairer with the prior approval of the Competent Authority of the Corporation and cost will be reimbursed by the Corporation, on production of supporting bills.
- 3.0 Admittance of the basic cost of materials used will be based on prevailing market rates **and based on the bill for material procurement for the items.**
 - 3.1 The Corporation reserves the right to establish procedure to satisfy itself about the reasonableness of the claim.
- 4.0 Repairs entrusted are required to be completed within the time specified by the Competent Officer(s) of the Corporation awarding the work.
 - 4.1 The workshop should submit the work procedure prior to carrying out the critical jobs and the jobs related to castings etc., on board dredgers to Master / CEO of the vessel / Head of the Project.
 - 4.2 The workshop personnel deployed on board DCI Dredgers should on Personal Safety Gears like Safety shoes, Gloves, Goggles, and helmets etc.
 - 4.3 The Corporation is at liberty to entrust the balance work to some other repair firm at the repairer's risk and cost, if the repair is not executed within the stipulated time or quality is not satisfactory.
- 5.0 The repairs are required to be carried out at different Ports in India including minor ports depending upon the assignment / place of dry-dock etc. Therefore, you are requested to quote your price at your original place of work and for outstation for the items specified in Schedule I & III, specifying the percentage increase in Schedule-II, with respect to your Original Place of Work.
- 6.0 For certain Items, it has been indicated in the Schedule that the rates are for renewals with ships supply. In such case, where supply could not be arranged by ship, the same shall have to be supplied by repairer and which will be paid along with material handling expenses as agreed to by the Corporation.

6.1 The old spare parts are the property of the Corporation and the same will have to be returned to the Corporation by the repairer.

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6.2 In case of steel scrap generated out of Crop & Renewal of Steel on board Vessel the same may be retained by the contractor.

7.0 **AWARD OF WORK**

7.1 The repair jobs will be raised by the Master / Chief Engineer Officer and awarded by Head of Project / Officer Authorized by Head of Technical Department by issuing Defect List-cum-Work Order. In the Circumstances requiring urgent repairs, work may commence on receipt of letter / email / fax / telephone communication in lieu of Defect List cum Work Order, which will be followed by a confirmatory Work Order with in 24 hours.

7.2 The Corporation reserves the right to allot / reject the work to any Registered Repair Workshop of DCI without assigning any reasons.

7.3 The Corporation reserves the right to entrust the repair work on 'Cost Plus' basis for Items of repair not covered in the Rate Schedule. The Cost Plus basis, provides for payment of actual costs inclusive of all overheads and profit as detailed at Schedule-I.

8.0 **BILLS:**

8.1 The Corporation will settle and release the admissible bill claim within **90 days** on the receipt of the complete bill in all respects at either DCI-Head Office / Project Office, provided the bills are in order in all respects.

8.2 The time stipulated in respect of the payment of the bills is not binding upon the Corporation under unavoidable circumstances.

8.3 Claims and bills raised on duplicate / Xerox / Photostat copies shall be summarily rejected will not be considered for payment.

8.4 In case, the Contractor claims Rate Schedule items (Schedule-III items) on cost plus basis payment will be regularized only on Rate Schedule and the repairer will not have any claim on this account.

8.5 It should be ensured that, repair bill complete in all respects should be submitted by the Contractor within **45 days** after completion of the repairs.

8.7 Rates quoted should be for carrying out repair works during normal time and alongside the jetty. Extra percentage as fixed at item 2 (a & b) of Sch-II shall be payable in case of works carried out in anchorage or during double Banking. No other claim or what so ever may be will be entertained on this account.

8.8 No Transportation, Lodging & Boarding Charges for men and material etc., would be allowed separately for outstation works.

9.0 **WORK DONE CERTIFICATE**

9.1 The repair bill (in Triplicate) should be submitted duly supported by the Yellow Copy (original) of the defect list cum Work Order, Work Done Certificate (WDC) in original, and Performance Guarantee Certificate (wherever applicable) and supporting vouchers in support of material claims (if any).

9.2 The work done certificate must be submitted to the vessel immediately on completion of work. No delay shall be accepted under any circumstances.

9.3 The Work Done Certificate should be prepared in line with the description of rate schedule book duly incorporating the details of labour engaged, materials consumed and Over Time etc.

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9.4 **The Work Done Certificate should be signed by : Deck side= 2 Officers (Master & One more officer), Engg Side = CEO & One more officer ((or) Officer Authorized by Head of Technical Department) and counter signed by Technical Officer (PO/ HO) should be submitted at the Project Office where work was awarded.**

9.5 Work shop should submit the work done certificate duly signed by their authorized representative in proof of the job carried as per the approved procedure and found in order.

9.6 The following details shall be recorded in the Work Done Certificate (W.D.C):

- i. Break-up details of Manpower employed and man-days consumed.
- ii. Date-wise Over Time hours,
- iii. Bill of materials used/ consumed.
- iv. Date of commencement & Completion of the works.

9.7 Mode of transportation (Boat/ Road) for repaired items and inspection at workshop by Ship staff / Surveyors shall be invariably recorded in the Work Completion Certificate.

OTHER TERMS & CONDITIONS:

10.0 The decision of the Head of Technical Department at DCI H.O shall be final, conclusive and binding on all parties to the contract upon all questions relating to specifications, designs, drawings and instructions and as to the quality of workmanship or materials used and manpower engaged in the repair work or any matter arising out of or relating to the specifications, designs and drawings and instructions concerning the repair works or execution or failure to execute the same arising during the course of the works and in the maintenance period.

10.1 The above shall not be the subject of arbitration and in no case shall the work be stopped consequent on such a dispute arising and the repair work shall be carried out by the repair workshop strictly in accordance with the instructions of the Head of Technical Department or the Officer specifically authorized by him.

10.2 No counter conditions of repair firms shall be entertained by DCI.

11.0 The Tenderer shall furnish latest Income Tax Clearance Certificate and PAN/TAN/ Number, enable us to indicate the same in Tax deducted at source Certificate as per recent I.T.Rules along with the Technical Bid. (Annexure-II).

12.0 The Tenderer shall submit a balance sheet duly audited for the previous period of three years and attested copy of Service Tax registration along with the Technical Bid (Annexure II).

13.0 Tenderer is required to pass on the “input credit of GST” available for the material and service procured by them for carrying out repair work to DCI Dredgers. For this purpose, Original invoice is required to be produced & submitted to DCI for all material/ service procured by them for carrying out repair work for DCI Dredgers, failing which DCI shall not reimburse such expenditures to the tenderer. Moreover, all procurement of material and services are to be on behalf of DCI in the capacity of “Pure agent” and all such invoices should bear the name of DCI as “Name of the tenderer – Account DCI”.

14.0 The tenderer shall enter into an agreement with DCI to the effect that they shall be acting as “Pure Agent” of DCI under GST Act while procuring material/ service for the purpose of execution of the subject.

(The above points at sl no-13.0 & 14.0 shall not apply to items quoted under Schedule-III)

14.1 The Tenderer should also produce the latest valid attested copies of State / Central Sales Tax Registration Certificate along with the latest Assessment Orders of the State and Central Governments with proof of payment, along with the Technical Bid. (Annexure II).

15.0 The Tenderer should also produce P.F.registration number issued by the local P.F.Authorities, towards payment of monthly Provident Fund contributions in respect of the workers / employees engaged by him. If the PF number is not submitted, the PF recovery will be made as per the percentage fixed by the PF Authorities from time to time from the repair bill.

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15.1 A copy of latest payment certificate detailing the amount paid for number of employees should be produced annually to the Corporations for verification.

16.0 All the correspondence exchanged between DCI and Tenderer shall form part of this contract.

16.1 The Rates in this agreement shall be valid for a minimum initial period of two years commencing from the date of signing of this R.S agreement by you and extendable for further period on mutual consent.

17.0 The Tenderer should also possess valid Port/Customs entry/License respectively, which should be produced to the Corporation for verification purpose wherever required.

18.0 Details of EMD to be submitted

Category of W/S	Turn-over per Annum	Value of EMD
All Category	INR-	Rs.25,000/-

18.1 The Tenderer of all category are required to furnish the value of EMD by depositing into DCI account as given & advised in NIT and details to submit with the Technical Bid.

18.2 The E.M.D. will be released only after satisfactory completion of the work at the end of Contract period. Under no circumstances, submission of above stated EMD by way of BG/DD can be adjusted from your outstanding/future bills.

18.4 After the agreement is concluded with the Tenderer, the EMD received in the shape of Bank Guarantee will be converted as Security Deposit and retained with the Corporation until the expiry of the Contract period.

18.5 The above amount will be forfeited without any prejudice in case of any default of the repair firm on any account of any works or claims.

18.6 In case the party submit E.M.D in the shape of Bank guarantee. The Bank guarantee should be on Rs.100/- stamp paper.

18.7 **The Bid of the Tenderer without E.M.D will be summarily rejected and no correspondence whatsoever will be entertained.**

18.8 **The EMD's/BGs shall be furnished a fresh under this contract (for new repair firms).**

18.9 **The Existing EMD/BG which are held with DCI in respect of existing repair firms (Old- 2013-15, & 2017-18) will be applicable for this new contract (2017-19).**

19.0 The cover contained Bid should also contain the information with Documentary Evidence on the Details as sought under **Annexure-II**, enclosed herewith.

19.1 The Bid cover should contain the Schedules I, II, III as the case may be, duly filled in with the rates quoted for each item. Though the Tender documents contain Schedules for all types of jobs, it may be noted that the bid will be evaluated separately for each type of work basing on the capacity, capability know-how and experience of the Tenderer as decided by the Corporation.

20.0 The workshop should quote all the items of a particular schedule.

21.0 The Corporations Decision is final in all matters above.

22.0 DCI reserves the right to accept, reject or extend the period of any or all tenders without assigning any reasons whatsoever.

23.0 **BELATED TENDERS ARE LIABLE TO BE SUMMARILY REJECTED.**

23.1 Should any dispute or difference arise between the Corporation and the contractor in connection with this Contract, or as to the rights and liabilities of the parties hereto, it shall be referred to Arbitration. Each party shall appoint an Arbitrator and the Arbitrators so appointed shall appoint a third Arbitrator and the award of Arbitrators shall be final and binding upon the parties hereto, subject to the provisions of the Arbitration and Conciliation Act 1996 (Act 26 of 1996).

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23.2 The Arbitrators shall give a reasoned award. Such Arbitration is held at Visakhapatnam, India. It shall be in accordance with the provisions of the Indian Arbitration or any statutory modification or re-enactment thereof. The Arbitrators may from time to time with the consent of the parties; enlarge the time for making and publishing the award.

24.0 This Contract is subject to the **jurisdiction of the Courts at Visakhapatnam** only.

25.0 The bidder will give an undertaking that they have not made any payment or illegal gratification to any person /authority connected with the bid process so as to influence the bid process and have not committed any offence under prevention of **Corruption Act in connection with the bid.**

16. The bidder shall disclose any payments made or proposed to be made to any intermediaries (agents etc.) in connection with the bid.

Thanking you,

Yours faithfully,
for DREDGING CORPORATION OF INDIA LIMITED

GENERAL MANAGER (TECH)

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SCHEDULE – I

Terms and Conditions for award of Repair works on **Cost Plus basis**

The Corporation reserves the right to entrust the repairs at cost plus basis, in respect of repairs for which the jobs are not covered in Schedule –III.

A) For the Repairs entrusted on cost plus basis, payment shall be made as under, subject to the condition that the overall cost claimed is considered reasonable by the Corporation:

- i) Quantum of the Materials and labour used for completion of a particular work must be reflected in the Work Done Certificate(WDC). If any materials procured for completion of a particular work, same must be reflected in the (WDC) and connected supporting proof of payment Vouchers /bills must be enclosed for material incorporated in the work:
- ii) 10% extra on actuals towards handling, transportation, Storage and other incidental charges, over head charges etc., will only be paid (not negotiable)
- iii) Taxes (Service tax/ GST) as applicable shall be paid.

B) **Cost of labour** inclusive of all overheads & Profits etc., directly employed on the work as reflected in the work done Certificates :(NORMAL WORKING HOURS i.e. 8 AM – 5 PM):

- | | |
|---------------------------------------------------|-------|
| i) Skilled labour per manday of 8 hours | Rs: - |
| ii) Unskilled labour per Man-day of 8 hours | Rs: - |
| iii) *Specialist/ *Engineer per manday of 8 hours | Rs: - |
| iv) Technician per manday of 8 hours | Rs: - |

C) **Overtime** on Schedule-I (on labour only)

(Sundays, Holidays & beyond normal working hours): **30 %** (Eg. Normal 8 Hrs= 100%, Overtime 8 Hrs = 130%, **Proportionate for part OT Hrs**)

on Schedule III % : **30 %**
(On labour component as indicated in Annexure – A)

Note: 1)* Specialist may be engaged by the repair firms for the specialized jobs only under prior written approval of Local P.O / H.O Officials.

2) Number of skilled and un-skilled workers engaged in normal and overtime hours on each day should be indicated clearly in work done completion certificate.

3) 5% extra towards Port & Dock permits and formalities will only be paid- When Vessel berths at Port/Repair Yard etc. (for only on basic labour cost of Sch-I & III) (not negotiable)

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D) Terms & Conditions

No payments will be allowed separately towards the following, as all these expenses shall be deemed to have been included in the rates quoted above.

- 1) Salaries of indirect labour such as Supervisors, Engineers, Administration Staff etc., :
- 2) Operational cost of Machine and equipment.
- 3) Provident fund, Gratuity, ESI and all other allowances/ Benefits to labour, statutory or otherwise :
- 4) Liability under workmen's Compensations Act and the labour regulations :
- 5) Cost of indirect Material :
- 6) Transportation of men and materials. :
- 7) Lodging and Boarding charges. :
- 8) Transportation charges (including loading and unloading) will be allowed in a separate defect list cum work order in case of an item, which weights **more than one tonne.** :
- 9) Sub-contracting of any job other than quoted will be allowed with prior approval of the Corporation. In such cases, bill will be paid on the basis of Sub-Contractors invoice subject to reasonableness & on production of Original bill of sub-contractor/ supporting proof of certified payment Vouchers/ bills, **plus 10%** towards overhead/handling and others Incidentals. No other charges will be allowed. :
- 10) The repair firm should also maintain proper accounts, records indicating costs incurred on each job to enable the Officers of the Corporation to verify the records, if considered necessary the Corporation reserves the right to settle the claims finally as considered reasonable. :

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**SCHEDULE – II
FOR OTHER PLACES
(Applicable for all items of Rate Schedule)**

1. **A) Place of basic rates quoted for : At PORT or PORTS =
(No extra % will be applicable for Basic Port or Ports)**
2. **B) Other Ports/Places:** (To be quoted on % basis over and above as quoted at (A). If no rate quoted for other places/Ports, a flat rate of 15% extra will be paid over and above quoted at (A) towards works carried out at other Ports, including new Dredging Projects at Places/Ports which are not listed below). **Note: Once repair firms' quotes for Other Ports/Places, then that repair firm has to attend repairs of dredger without fail as per advice/direction of DCI.**
3. **C) Extra percentage will be applicable on basic rates of Sch-III and on basic cost of labour of Sch-I.**

S.NO	OTHER PLACES/Port	%	REMARKS
1.	MUMBAI		
2.	KANDLA		
3.	GOA		
4.	HALDIA		
5.	KOLKATA		
6.	KOCHI		
7.	MANGALORE		
8.	KARWAR		
9.	VISAKHAPATNAM		
10.	KAKINADA		
11.	PARADIP		
12.	CHENNAI		
13.	ENNORE		
14.	PONDICHERRY		
15.	TUTICORIN		
16.	HAZIRA		
17.	NAGAPATNAM		
18.	RAMESHWARAM		

2. (a) Extra for doing work in double banking vessel:- 5 % on labour Cost (Sch-I & III)
(b) Extra for doing work when Vsl is operating in stream/Anchorage-10% on labour Cost (Sch-I & III)
 3. **Extra percentage for other places is not applicable for the items manufactured, at the base project and same supplied to Vessel at other Port/ places.** However, the actual expenditure incurred towards transportation of the finished product shall be payable on production of copy of documentary proof.
- Note: - (Above 2 (a) and (b) are applicable for Schedule I & III labour component only).**

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SCHEDULE – III
(Scheduled items of Repair)

01 – 01	=	Decarbonisation / Overhaul of Engines
01 – 02	=	Ancillary Repair works for Diesel Engines
02 – 01	=	H.E & Coolers for Diesel Engines
03 – 01	=	Centrifugal Sea Water/ Fresh Water Pumps
04 – 01	=	Gear pumps
05 – 01	=	Dredge / Sand Pumps
06 – 01	=	Jet pumps
07 – 01	=	Sea Suction & Discharge Valves
08 – 01	=	Hyd. Operated sluice / butterfly valves (Mechanical Works)
09 – 01	=	Drag Heads
10 – 01	=	Hydraulic Cylinders.
11 – 01	=	Wind lasses.
12 – 01	=	Sheaves & Pulleys
13 – 01	=	Renewal G.I Pipes
14 – 01	=	Renewal of Scheduled/Solid drawn Pipes
15 – 01	=	Steel Renewals
16 – 01	=	Metal Building / Reconditions of Heavy items
17 – 01	=	A.C Motors / Generators
18 – 01	=	D.C Generators / Motors
19 – 01	=	Alternators
20 – 01	=	All types of Couplings
21 – 01	=	Hydraulic Winches & Gear Boxes.
22 – 01	=	Sand Pump and Jet Pump, Suction and Discharge Pipes
23 – 01	=	Electrical miscellaneous works
24 – 01	=	A/C & Refrigeration works
25 – 01	=	Make & Supply items (MS, SS, CS)
26 – 01(A)	=	Servicing of Life Boats
26 – 01(B)	=	Servicing of Life Rafts
27 – 01	=	CO ₂ Cylinders & Fire Extinguishers.
28 – 01	=	All Gantries
29 – 01	=	Tank Cleaning
30 – 01	=	Electronic, Pneumatic etc.services.
31 – 01	=	OEM Services for ME/AE Fuel pumps & Controls.
32 – 01	=	OEM Services to systems- Hydraulics

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SCHEDULE – III

Overtime-regulated on Schedule – III items on Labour Component basis as appended below:
(Non-Negotiable)

Sch-III Item ref:	Item Description	Applicable percentage on labour component
01--01	Decarbonisation / Overhaul of Engine	85%
01 – 02	Ancillary Repair Works for Diesel Engines	85%
02 – 01	Heat Exchangers / Coolers for Diesel Engines	85%
03 – 01	Centrifugal Water Pumps	60%
04 – 01	Gear Pumps	60%
05 – 01	Dredge / Sand pumps	75%
06 – 01	Jet Pumps	70%
07 – 01	Sea suction / discharge valves	75%
08 – 01	Hyd. Operated Sluice / butterfly valves (Mechanical Works)	80%
09 – 01	Drag Heads	70%
10 – 01	Hydraulic Cylinders	60%
11 – 01	Wind lasses	60%
12 – 01	Sheaves & pulleys	60%
13 – 01	G.I. pipes	60%
14 – 01	Sch/Solid Drawn Pipes	70%
15 – 01	Steel Renewals	60%
16 – 01	Metal Building / Recondition of Heavy items	65%
17 – 01	A.C Motors (Stators & Rotors)	50%
18 – 01	D.C Generators & Motors	75%
19 – 01	Alternators	60%
20 – 01	All types of Couplings	80%
21-- 01	Hyd. Winches & Gear Boxes	50%
22 – 01	Sand Pump and Jet Pump, Suction and discharge Pipes	60%
23 - 01	Electrical Miscellaneous works	60%
24 – 01	A/C & Refrigeration Works	75%
25 - 01	Make & Supply Items (MS,SS,CS)	50%
26 – 01	Servicing of Life Rafts	Nil
27 - 01	CO ₂ Cylinders & Fire Extinguishers	75%
28 – 01	All Gantries	80%
29 – 01	Tank Cleaning	95%
30 – 01	Electronic Pneumatic Equipment.	
31 – 01	Service of AE/ME Fuel Pumps	
32 – 01	OEM Services- hydraulics	

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Special Terms / Rates

SL No	Description of Work	Firm Rate Rs.
1.	High Pressure Fresh Water Jetting (150 BAR or More) rate/Sq.M	--
2.	Supply of Mn Steel plate for false plate – per Kg. of finished Product	As per Schedule 25-01 --
3.	Plastic carbide compound to be applied :- a) Ship supply per Kg: b) Work Shop Supplly per Kg:	As per Schedule 05-01 -- --
4.	Building up of impeller with E-104 or its equalant electrodes (Inclusive of cost of electrodes) – Per Kg. of electrodes used. Rate:	As per Schedule 16-01 --
5.	Gauging of the complete sand pump casing by UT Gauge (inclusive of supply of drawings)	As per Schedule 15-01
6.	Building up of sand pump casing with E-104 / BorB/ equivalent electrodes – per Kg. of electrodes used Rate: (Inclusive of cost of electrodes)	As per Schedule 16-01 --
7.	Power supply 10% of basic rate of schedule-I & III as indicated in case power is not supplied by DCI and when the work is not done at firms work shop/ site.	10% of total bill Value <i>L= Labour</i> <i>M= Materials</i> <i>C+ = Cost Plus</i>

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SCHEDULE III
01 – 01 DECARBONISATION AND OVERHAUL OF ENGINES

	Engine	Engine
A) Removal and replacement of all connections (such as inlet, Exhaust manifold, lub oil, fuel oil, cooling water pipes and air pipes, As Required for decarburization of Engines)	(upto 400 hp)	(401 to 600 hp)
Removal and replacement of one cylinder head.	:	:
Removal and replacement of one piston and one set piston rings	:	:
Taking out one piston from connecting rod and examining and measuring gudgeon pins and bush clearances and reassembly.	:	:
Overhauling cylinder heads, valve seat grinding, reassembling Components after repair / renewal each unit of cylinder head.	:	:
Calibration of cylinder liner one number	:	:
Calibration of piston one number	:	:
Removal and replacement of one set of crank pin bearing and Crank pin gauging.	:	:
B) Inspection of gear train-backlash, pitting and corrosion, bearing Clearance of gear shaft to record.	:	:
C) Removal and replacement of one number cylinder liner (cleaning and painting of liner and block and lapping cylinder liner)	:	:
D) Removal of one set of main bearings and checking of clearance and re-assembling.	:	:
E) Engine trial as required by Surveyor / C.E.O	:	:
F) One number cylinder head to be taken out from vessel to workshop. All valves to be removed, valve seat to renew, valve to lap with valve seat, valve guide to renew, Cylinder head parts to assemble, pressure test on completion of overhauling. Same to be delivered on board Dredger. :		

Note: 1) All spare parts required for replacement will be supplied by **DCI**.
2) Above rates shall be applicable to ONE UNIT only (except sl no B & E above).

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01 – 01 DECARBONISATION AND OVERHAUL OF ENGINES

SL No	ENGINE	A + E Rate Per Unit Rs.				F Rs.
			A+B+E	D	A+C	
1.	MAN G V 30/45 BHP 1700					
	i) Dr- V, VI, VIII for 8 cylinders BHP 1700					
	ii) Dr- VIII for 7 cylinders BHP 1670					
	iii) Dr- V, VI for 6 cylinders BHP 1260					
2.	MAN 17.5 / 22 BHP 305 6 cylinders Dr- V, VI					
3.	MAN RV 16/18 BHP 625 8 cylinders Dr- VII					
4.	MAN RV 22/30 BHP 1170 Dr-VII					
5.	MAN VV 22/30 BHP 2300 8 cylinders Dr-V,VI					

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Contd

01 – 01 DECARBONISATION AND OVERHAUL OF ENGINES

SL No	ENGINE	A + E Rate Per Unit Rs.				F Rs.
			A+B+E Rs.	D Rs.	A+C Rs.	
6.	MANSLUZER BHP about 1700 Dr-VIII					
7.	Daihatsu 6 DSM SI BHP 1800 Tug VI					
8.	Daihatsu 6 PKT-14 A BHP 270 Tug VI					
9.	MAN B&W 7L 40/45 KW 3850 Dr- IX, XI, XV					
10.	MAN B&W 4 L 20/27 KW 368 Dr-IX					
11.	MAN B&W 5 L 20/27 KW 368 Dr-XI					
12.	MAN B&W 6 L 40/45 & 6L 40/54 KW 2900 / KW 3900 Dr- XII, XIV Dr- XVI, XVII					
13.	MAN D 2842 LE KW 380 Dr- XV					
14.	SWD 6 T M 410 KW 3126 Aquarius					

01-02 ANCILLARY REPAIR WORKS FOR DIESEL ENGINES

SL No	Description of Work	BHP up to 300 Rs.	301 to 650 Rs.	651 to 1000 Rs.	1001 to 2000 Rs.	2001 to 5200 Rs.
1.	Removing cylinder head (1 no) to workshop and lapping of valves, seats and Fitment / Handing over to ship after pressure testing up to 6 bar including chemical cleaning (Chemical Ship supply)					
2.	Removal of Fuel Pump for repairs, over haul with ship's spares, Calibration and fitting back for Block type PPs a) 4 elements PPs b) 5 elements PPs c) 6 elements PPs d) 8 elements PPs e) 12 elements PPs					
3.	Removal of fuel injectors overhauling and testing and fitting back (Spares Ship Supply) Rate per Injector					
4.	a) Complete Turbocharger (MAN make, models: NA/NT/NR) to be dismantled, over-hauled, worn-out parts to renew with ships spares and also to show trials/ for survey if required O/H- Rate per Turbocharger. Incl. All clearances to check, record & show as per Manual b) Dynamic balancing of Rotor (Extra Cost to (a) above)					
5.	Taking of Pistons to Work shop necessary repairs to be carried out. under Class Surveyors supervision. (Survey fee to DCI a/c). Rate/Piston					

01-02 ANCILLARY REPAIR WORKS FOR DIESEL ENGINES

SL NO	Description of Work	BHP up to 300 Rs.	301 to 650 Rs.	651 to 1000 Rs.	1001 to 2000 Rs.	2001 to 5200 Rs.
6.	Removing of LO pump from Engine, dismantling of same and showing to Surveyor. Reassembling and boxing up of same Rate per pump.					
7.	Main and sand pump engine pedestal bearing. Inspection if required renewal of bearing/ liner (Spares ships supply). Complete bearing renewal and alignment (at extra cost) as required. Rate per Bearing.					
8.	<p>a) Removing and re-lagging (with new material) of exhaust manifold exhaust pipes of main Engine/Aux. Engine with Heat resistive material up to 600 °C (minimum)</p> <p>Rate per Sq. Meter (50 mm thick) including material cost</p> <p>b) Renewal of GI sheeting to exhaust manifold of Main engine / Aux. engine. Rate per Sq. Meter (incl Mat) Rs:</p>					
9.	Attached pump removal from engine, dismantling, presenting for survey, assemble with ship supply spares and fitting back to the engine. (Repairs if any extra)					
	<p>a) Fresh Water</p> <p>b) Sea Water</p> <p>c) Lub Oil</p>					
10.	Checking of alignment of complete Engine with gearbox after disconnecting the coupling and coupling to fit back after rectification/ repairs if any (Note: Rectification/Repairs will be extra for all items above.)					

03 – 01 CENTRIFUGAL SEA WATER FRESH WATER PUMPS

SL. NO.	Description	WORKSHOP RATES FOR PUMP HORSE POWER			
		UPTO 5 HP	UPTO 15 HP	UPTO 20 HP	UPTO 25 HP
		Rs.	Rs.	Rs.	Rs.
1.	Disconnect and separate motor, open Pump casing for inspection. Worn out parts to renew with ship supply Spares. Bearing landing areas to built up (cost extra) and machine or sleeves to be shrunk fitted. Refit with new joint and connect motor in situ.(Spares, Sleeves, Joints & Matrls Ship supply)				
2.	Skimming of impeller and shaft. Wearing rings to cast and machined to the sizes. Shaft sleeves to make if required. (Wear rings, Sleeve at cost Extra)				
3.	Disconnect pump from position. Remove complete pump, shift to W/S and overhaul completely. Retransport to ship and refit in position including satisfactory running trial (excluding cost of spares, wear rings, bushes and bearings, materials etc).				
4.	Submersible pumps overhaul and Trials to show, Type-Mody (14 HP and Less), Rs: (15 HP and More), Rs: Other type -(14 HP and Less), Rs: (Spares cost extra for all)				

Note: Motor & Pumps are to be aligned properly, Running direction of Motor to be checked. Pressure gauges and pipe clamping to fit in place before running Trials.

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04 – 01 GEAR PUMPS

SL. NO.	Description	WORKSHOP RATES FOR PUMP HORSE POWER			
		UPTO 5 HP Rs:	6 to 15 HP Rs:	7 to 20 HP Rs:	21to 25 HP Rs:
1.	<p><u>Steering gear / pumps:</u></p> <p>Steering main pump (constant / variable delivery type) complete to be opened, overhauled, put up for Inspection/ survey boxed back on board, with ship supply spares if required, fitted in place and satisfactory Trials to be given. (Spares Ship supply)</p>	--			
		Cost of spares ---	extra		
2.	<p><u>Rudder power transmitting unit – vane type:</u></p> <p>i) Hydraulic motor to be opened up for survey, boxed back and Trials to be given.</p> <p>ii) Non return and equalising valves to be overhauled.</p> <p>(all Spares Ship supply)</p>				
3.	<p>Lub Oil Pumps (15 hp & less): To overhaul. Bushes, bearings, casing, seals etc., worn out parts to be renewed.</p> <p>(all Spares Ship supply)</p>				
4.	<p>Fuel Oil Pumps: To over haul. Bushes, bearings, casing, seals etc., worn out parts to be renewed.</p> <p>(all Spares Ship supply)</p>				

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05 – 01 DREDGE / SAND PUMPS

Sl. No	Description	FIRM RATE
		Rs.
1.	IHC type Sand/ Dredge pump suction side wedge pipes to be opened and boxed back with new ship supply seal / joints (including blanking of lines).	
2.	IHC type Sand pump suction side cover to be opened and boxed up with new Ship supply seal / joints.	
3.	IHC type Sand pump suction side wearing plate to be renewed including welding of lugs, if reqd (wearing plate & lugs ship supply).	
4.	Shaft side wearing plate to be renewed including welding of lugs, if reqd (wearing plate & lugs ship supply).	
5.	IHC type Sand pump suction side cover and impeller to be removed and boxed up with same impeller or new / reconditioned impeller and satisfactory Trials to be given.	
6.	Flushing water chamber and sealing pot to be removed chrome bush tripartiate rings and gland seals to be removed for inspection and boxed back with ship supply spares.	
7.	Application of one coat of plastic carbide or any cold putty for the sand pump casing, sand pump impeller suction pipes, (cold putty or plastic carbide ship supply) Rate per Kg. If materials workshop supply & apply- rate per Kg.	
8.	IHC type Sand pump thrust block to be dismantled, to overhaul by renewing ship supply spares, show to surveyor (if reqd) and boxed back. Thrust block to align with discharge cover and Satisfactory Trials to be given.	
9.	Making and supplying of M.S/Nihard wear plate for the suction & discharge for the sand pump. Rate per Kg. of finished plate,MS-- Nihard--	As per SCH-25.01
10.	Welding of all lugs (ship supply) on one wear plate Rs:	
11.	Supply of M.S lugs for wear plate Rate per piece Rs:	As per SCH-25.01
12.	M.S Dia phragm plate to make & supply Rate per Kg. of finished product Rs:	As per SCH-25.01
13	Rubber Gasket /Cord (3MM)/5 MM	

Note: M S Lugs if supplied by the Work Shop, the rate would be regulated as per RS - 25 - 01

06 - 01 JET PUMPS (300 HP to 900 HP)

SL No	Description	FIRM RATE Rs:
1.	Coupling to disconnect, re-connect and align the pump before boxing back	
2.	a) Casing cover to remove and Complete shaft with sleeves, Wearings, Bearings and impeller to remove, repair (excluding metal building/ machining of shaft/ casing) / renew and box back. All parts to assemble and satisfactory Trials to be given. Pump to be pressure tested/trials and shown to ship staff. (Alignment if any at extra Cost) Rs. b) Cost of Machining of pump casings (2 half) Rs. (All Spares are Ship supply)	
3.	One coat of Devcon putty or plastic carbide (ship supply) to apply and fill up cavities as per ship staff instructions application Rate per K.g Rs:	As per SCH-05.01
4.	Manufacture & Supply wear rings (C.I mat) Rate per Kg. Rs:	As per SCH-25.01
5.	Complete pump and foundation bolts and coupling bolts to renew (Ship supply bolts) Rate as per RS – 25-01	As per SCH-25.01

Note: Payment will be made on prorata base, if the weight of the putty product is fraction.

07 – 01 SEA SUCTION AND DISCHARGE VALVES

1. To open up, overhaul, put up for inspection/ survey. Grind / lapping the valve and valve seat in place. Built up / machine (at cost extra) the valve body wherever required, rubberized portion to be checked and repaired (extra cost) if required. On completion of survey, valve to be boxed back with new gasket, gland packing, bolts and nuts. Valve to be pressure tested (Suction V/v's - 8 bar, Discharge V/v's – 15 bars and boxed **up in situ**/ onboard. (all Spares – ship supply)
2. Disconnect from line, transport complete valve to workshop and back, refitting in place and satisfactory trials. Extra on serial No.1- 60%

Note: For intermediate size/Dia Valves, next higher size valve rate will be applicable.

RATE FOR SL NO.1

Dia in mm	Rate		20	25	30	40	50	75	100	125	150	200	250	300	350	400	500
Ship side valve (Gate or Butterfly)	FIRM																
Globe V/V	FIRM																
Butterfly V/V	FIRM																
Gate V/V	FIRM																
Storm valves	FIRM																

NOTE: FOR INTERMEDIATY SIZE / DIA VLAVES, NEXT HIGHER SIZE VALVE RATE WILL BE APPLICABLE

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**08 – 01 HYDRAULICALLY OPERATED SLUICE & BUTTERFLY VALVES
(Mechanical Works)**

SI No	Description of work	Dia							
		300	400	500	650	700	800	850	1000
1.	<p>All necessary Hyd & flushing water pipelines to be removed and valve to be dismantled by removing of combirings, nose and buffer rings. Combi, Nose and buffer rings to be renewed (ship supply). Valve body in way of buffer rings / seat rings to be built up (at extra cost) by plastic carbide if required. Flushing water space to be cleaned and painted with Apexior-3. Valve to be assembled back and shown to ship staff for satisfactory operation by operating valve manually. All pipelines etc to be connected back (Nose and buffer rings, cold putty or metal and apexior – ships supply). Any leakages through pipe line joints to be rectified and job to be carried out to the entire satisfaction of ship's staff. Cost including Staging erection if required. (Machining of Valve if reqd, at extra cost)</p> <p align="center">Rs:</p>								
2.	<p>a) Valve to be removed from ship and taken to workshop. Valve to be dismantled and nose and buffer rings removed. Valve body in a way of nose and buffer rings to be calibrated and report submitted. Valve seat ring landing area to be built up and machined if required. Water boxes to be pressure tested to five kg. per Cm Sq. Water box to be scraped, cleaned, and pained with Apexior-3. Valve slide and spindle to be dismantled. Slide spindle to be checked for trueness. Indicator spindle to be checked for trueness and mechanism to be overhauled, Guide lugs in valve body to be renewed (ship supply). Nose and buffer rings to be renewed and valve assembled back. Valve to be tried out hydraulically by hand pump to the satisfaction of ship staff. Valve to be delivered on board and secured. (Metal built up & Machining cost-extra)-</p> <p>Rs.</p> <p>b) Valve to be removed from place after removing all necessary Hyd & F/W pipeline connections and to be fitted back after overhaul / repairs and tried out.</p> <p align="center">Rs:</p>								

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**08 – 01 HYDRAULICALLY OPERATED SLUICE & BUTTERFLY VALVES
(Mechanical Works)**

Sl No	Description of work	Dia							
		300	400	500	650	700	800	850	1000
3.	Worn-out portion in way of nose and buffer rings and nyleton ring to be built up by low hydrogen electrodes and hand grind to required diameter. Rate to be quoted per Kg. of electrodes. Rs:								
4.	Worn-out portions on stainless steel slides to be built up and hand grind to original shape/ sizes. Rate Per Kg. of electrodes. Rs:								
5.	Carrier rings to be calibrated and worn out portions to be built up with low hydrogen electrodes and hand grind to correct size. Rate Per Kg. of electrodes. Rs:								
6.	Worn-out portions of the water box to be cropped and renewed. Per Kg. of finished product. Rs:								
7.	<p><u>Butterfly Valves: (Types: Handle / Wheel/ Actuator)</u></p> <p>a) Over hauling:</p> <p>Complete valve to be removed after disconnecting the Actuator Hyd.Lines/ Handle/ Wheel</p> <p>Complete Rubber lining to be through cleaned and checked for defects and report to submitt</p> <p>Actuating Mechanism / Gear Train / Spindle connection operating mechanism to overhaul.</p> <p>Valves to be Pressure tested to 10 Kg. per cm² after overhaul</p> <p>Valve to be fitted in place with new bolt & nuts and satisfactory trials to be given. Rs:</p> <p>b) Complete Rubber lining of Valve (Vulcanized) to renew Rs.</p>								

09 – 01 DRAG HEADS

SL. NO	Description of work	Firm Rates Rs.
1.	<p>A) Reconditioning of Drag Head at Work shop: Jet type/ Non-jet type/ California / New generation Drag head, to transport from ship to workshop and to dismantle completely by cutting out pin guard plates. i) The drag head parts such as visor, visor body, pins & bushes are to be dismantled, check for wear & tear. If required, pins & bushes are to build up & machined (at extra cost) / renewed (ship supply). ii) Wearing pads / nozzle pads / diamond blocks (ship supply) are to be renewed as necessary. iii) Visor & body are to be gauged and thinned down areas to be renewed as per instructions (record of gauging reports duly certified by the ship staff to be enclosed together with work done certificate) (Steel renewal-extra). iv) Buffer spring to be overhauled/ renewed (ship supply). v) All the parts of the drag head to be assembled chipped painted and limited back to Vessel or Project Office / CSC. (the charges inclusive of loading ,unloading & crane charges)</p> <p style="text-align: right;">Rate per Drag head Rs: (LS)</p> <p>B) Both sides Rubber fenders (ship supply) of drag head to be renewed. Rs:</p>	<p>Transport- To & Fro</p> <p>Cost for- i)</p> <p>Cost for- ii)</p> <p>Cost for- iii)</p> <p>(Steel extra)</p> <p>Cost for- iv)</p> <p>Cost for - v)</p> <p>(total)</p> <p>Cost for - B)</p>
2.	<p>Renewal of the following (ship supply) :</p> <p>a) Diamond block b) Wearing pad c) Nozzle pad. New diamond shape rubbing blocks (Diamond block / Wear Pads, Ship supply) Rate for Nozzle pad/ Diamond block Rs:</p> <p style="text-align: right;">Rate for wear pad: Rs</p>	
3.	<p>Changing of buffer spring of California drag heads (spring ship supply)</p> <p style="text-align: right;">Rate of spring: Rs:</p>	
4.	<p>a) Renewal of damaged drag head (flange ship supply).</p> <p style="text-align: right;">Rate per Flange. Rs:</p> <p>b) Manufacture and supply of drag head flange including machining and bolt holes</p> <p style="text-align: right;">Rate per Kg. of finished weight Rs:</p>	
5.	<p>Drag head shoes to be manufactured and supplied on board Vessel</p> <p style="text-align: right;">Rate per KG of shoe Rs:</p>	
6.	<p>Building up and hard facing of the wear down area of drag head Diamond blocks, wearing pads, rubbing blocks, shoes, gratings etc with electrodes.</p> <p style="text-align: right;">Rates quoted at Schedule 16-01 will be applicable</p>	

Note: Diamond Blocks, Wear Pads & Nozzle Pads etc, if supplied by the Work Shop the rate would be regulated as per Rate Sche.- 25 – 01.

10 – 01 HYDRAULIC CYLINDERS

SL. NO.	Description	Firm Rate Rs.
1.	<p><u>Rudder power transmitting unit:</u></p> <p>i) Hyd. Ram to be withdrawn and chromium plating to be checked after moving the trunion arrangement, bucket and gland seals to be renewed (ship supply), seals to be calibrated and assembled back, satisfactory trials to be given.</p> <p>ii) Trunion pin and bush to be calibrated. Worn out pin and bush (Spares ship supply) to be renewed.</p> <p>iii) Ram bucket and gland seals to be renewed, pistons to secure and lock on the Ram. (Spares ship supply)</p> <p>iv) Equalising valves and non return valves to be overhauled; satisfactory Trials to be given.</p>	
2.	<p>Hydraulic cylinder to be dismantled, bucket and gland seals and rubber ring to be renewed from ship's stock. Hydraulic Cylinder to be gauged and report submitted. Cylinder to be fitted back after renewal of seals. Seals to be Pr. Tested to 250 bar. Valve to be shown in working condition to the satisfaction of ship's staff. (Spares ship supply)</p>	
3.	<p><u>HYDRAULIC CYLINDERS</u></p> <p>Remove Hyd.Cylinder from its position (dismantle swivel bearing) inspecting and renewing seals and 'O' rings and boxing back after ship staff inspection.</p> <p>a) Fork / piston to unscrew from Ram</p> <p>b) Gland cover and tripartite rings to remove</p> <p>c) Bucket and gland seals and 'O' rings to renew</p> <p>d) Piston locking on the Ram to check and secure</p> <p>e) Cylinder to <u>check</u> for any wear down / scoring / ovality (repairs extra)</p> <p>f) Ram surface to <u>check</u> and defects to identify and polish the Ram (if reqd).</p> <p>g) Ram to be chrome plated if required.(chrome plating cost on CP)</p> <p>h) Seals to pre pressure tested to 250 bar after box up. (Seals , 'O' rings, Swivel bearings, pins and all Spares are ship supply :)</p> <p>1. Drag head gantry (approx 250X125X2500mm) Rate per cylinder : Rs</p> <p>2. Intermediate gantry (approx 250X125X2500mm) Rate per cylinder : Rs</p> <p>3. Swell compensator (approx 250x125x 2 mts length) Rate per cylinder : Rs</p> <p>4. Bottom door Hyd. Cylinder (approx 320X160X1080mm) Rate per cylinder : Rs</p>	

10 – 01, HYDRAULIC CYLINDERS

SL. NO.	Description	Firm Rate Rs.
	5. Trunion gantry (approx 200X100X589mm)	Rate per cylinder : Rs
	6. Upper door Hyd. Cylinder	Rate per cylinder: Rs
	7. In-Out Cylinder (Suction Bend)	Rate per cylinder : Rs
	8. Sluice valve Hyd Cylinder (Valve Dia 600/700/800/100)	Rate per cylinder : Rs
	9. Overflow duct Cylinder (Dr-IX,XI,XII,XIV XV,XVI,XVII) (approx 280X160X6100mm)	Rate per cylinder : Rs
	10. Spud carriage Cylinders (Dr VII, Dr AQRS, Dr XVIII)	Rate per cylinder : Rs
	11. Spud Hoisting Cylinders (Dr VII, Dr AQRS, Dr XVIII)	Rate per cylinder : Rs
	12. Hoisting & Lower Cylinders	Rate per cylinder : Rs
	13. Steering Gear Cylinders	Rate per cylinder : Rs
	14. Anti Pollution valve cylinder	Rate per cylinder : Rs
	15. Weir door Cylinders (Dr-V,VI,VIII)	Rate per cylinder : Rs
	(5% extra Cost shall be allowed for staging, if required)	

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11 – 01, WINDLASSES

SL NO	Description	Firm Rate (Rs.)
A.	<u>Gear box:</u>	
1.	Inspection covers to be opened up for inspection / survey and boxed back.	
2.	Damaged gear to renew and satisfactory trial run to show (gear supply by ship)	
3.	Damaged bearing / bushes renewal and satisfactory trial run to show (bearing supply by ship)	
4.	Oil seal renewal and satisfactory trial run to show , (Oil seals ships supply).	
5.	Gear cases to be dismantled, gears to be taken out for inspection / survey and box back satisfactory trials trial run to show.	
B.	Brake	
1.	Brake Lining (ferodo- lining ship supply) to be renewed, clearances to be adjusted & satisfactory trials to be given (cost of lining material on C+).	
2.	To repair MS lining of backing for brake pads; satisfactory trials to be given. Rate per Kg.	
C.	Slip clutch	
1.	Slip clutch to be overhauled; satisfactory trials to be given after inspection / survey.	
2.	Renew of clutch plates; satisfactory trials to be given (Rate excluding cost of lining).	
3.	Adjust Slip clutch settings as per specified load & satisfactory trial to be given.	
4.	Renewal of coupling bolts and bushes (cost of material on C+) <ul style="list-style-type: none"> ▪ Rate per Bolt: Rs: ▪ Rate per bush: Rs: 	

Note: Bolts & Bushes if supplied by work shop, the rate would be regulated as per RS (25 – 01)

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12 – 01, SHEAVES & PULLEYS

SL. NO.	Description	FIRM RATE	
1.	<p><u>Overhaul of Pulley blocks</u></p> <p>a. Removal of pins and pulleys from block (including rigging, removal of pulley blocks / pulleys. Build up grooves as required, inspection of pins and bushes and renewal as necessary (Rate excluding cost of pin, bush and metal built up- extra)</p> <p>b. Reassembling of pulley block with all grease connections.</p> <p>(rate for A & B above)</p> <p style="padding-left: 40px;">Charges for 10 ton cap. and above Rs:</p> <p style="padding-left: 80px;">Charges for 5 to 9 ton cap. Rs:</p> <p style="padding-left: 80px;">Charges for 2 to 4 ton cap. Rs:</p> <p style="padding-left: 40px;">Charges for below 2 tons cap. Rs:</p>		

- Note:
1. Above charges are inclusive of transportation to and from ship to workshop and back
 2. Above charges are inclusive of rigging, removal of pulley blocks and refitting etc.,
 3. Metal built up as per 16-01.

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13 – 01 RENEWAL OF G.I. PIPES

Taking off the old damaged/ defective pipes and renewing the pipes assuming straight lengths per meter including rubber joints bolts and nuts wherever necessary. Less than one meter will be paid as one meter and above one meter will be paid as actuals. (Rates at column 3, 4, 5 & 6 including Materials). Costs for Pipe sizes beyond Dia 200 mm shall be paid proportionately.

Pipe bore (in MM)	Pipe renewal with material per meter	Extra for each bend, Cost incl Matrl	Extra for each flange renewal if any	Extra for each branch connection	For clamp Renewal if any	Opening of pipe for cleaning and boxing with patch work if any, Cost per Meter. Pipes to be clamped after renewal.	Extra percentage for pipe renewal or opening & boxing back of pipes under floor plates (Applicable on column 2 & 7 only)
1	2	3	4	5	6	7	8
	Rs.	Rs.	Rs.	Rs.	Rs.	Rs.	%
10							20%
12							
15							
18							
20							
25							
32							
36							
38							
40							
42							
48							
50							
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Pipe bore (in mm)	Pipe renewal with material per meter	Extra for each bend, Incl Matrls	Extra for each flange renewal if any	Extra for each branch connection	For clamp Renewal if any	Opening of pipe cleaning and boxing with patch work only per Meter. Pipes to be clamped after renewal.	Extra percentage for pipe renewal or opening & boxing back of pipes under floor plates (Applicable on column 2 & 7 only)
1	2	3	4	5	6	7	8
55							
60							--20%--
65							
70							
75							
80							
85							
90							
95							
100							
125							
150							
175							
200							

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14 – 01(A), RENEWAL OF SCHEDULE/SOLID DRAWN PIPES

Costs for Pipe sizes beyond Dia 100 mm shall be paid proportionately.

I.D/NB of solid drawn pipe/Sch -40 /80 Pipes	Rate for renewal for each meter, (including Labour charges, Gas & all matrls) Cost of Pipe extra on C+, (Min 1 Mtr)	Rate for renewal for each Bend (Cost Including Material + Labour)	Extra for each flange renewal (Cost Including Material + Labour)	Extra for each MS / Nylon clamp renewal/ refitting (Including Material & labour)	Extra for doing the above work after removing the floor plates and other obstructions wherever necessary and refitting back.
Column-1	2	3	4	5	6
Up to 12					<div style="display: flex; flex-direction: column; align-items: center;"> <div style="margin-bottom: 10px;">↓</div> <div style="margin-bottom: 10px;">20 % (extra)</div> <div style="margin-top: 10px;">↑</div> </div>
15					
18					
20					
25					
30					
35					
38					
40					
42					
48					
50					
55					
60				”	
65				”	
70				”	
75				”	
80				”	
85				”	
90				”	
100				”	
				”	

Note: Less than one Meter will be paid as one meter and above one meter will be paid as per actual, (for labour & Material cost)

Labour Cost for renewal of Pipes Schedule -40/ 80 (all Schs), including consumables will be regulated as per Col- 2 above.

Minimum 1 mtr Cost shall be payable (Material & labour) and proportionate rate for beyond 1 mtr pipe will be payable.

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15 – 01, STEEL RENEWALS

SL. NO	Description	Firm Rate Rs.
3.	Renewal of railing per metre: (Cost incl- Materials) a. 18 – upto 25mm dia solid rod b. 25 – upto 50mm pipe G.I	
4.	Heating and fairing in place per metre of railing : a. 18 –upto 25mm dia solid rod b. 25 – upto 50mm pipe G.I	
5.	Renewal of chequered plate of ladders, floor plates, gangways including angle support frames : a. Mild steel per Kg. Rs: b. Aluminium per Kg. Rs:	
6.	Renewal of Stanchions per Stanchion (M.S) (Size- 12mm x 1200 mm long- 1 no.)	
7.	a. Drill test of a ship side plates, deck plate and other steel members and filling up the hole. Rate per hole b. Ultra Sonic gauging (UTG) (Minimum 50 points shall be paid per occasion) i. up to and including 50 points Rate per point Rs: ii. 51 to 500 points Rate per point Rs: iii. 501 to 1000 points Rate per point Rs: iv. above 1000 points Rate per point Rs:	

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16 – 01, METEL BUILDING / RECONDITIONS OF HEAVY ITEMS

SL. NO	Description	Firm Rates Rs.										
1.	<p>In situ building up or hard facing with suitable electrodes (Electrodes ships supply) on board vessels / workshop (make, size and quantity of electrodes in Kgs utilized to be certified in the work done certificate)</p> <p style="text-align: right;">Rate per Kg. of electrodes built up Rs:</p>											
2.	<p>Building up with MS electrodes including cost of electrodes. (make, size and quantity of electrodes in Kgs utilized is to be certified in the work done certificate)</p> <p style="text-align: right;">Rate per Kg. of electrodes built up Rs:</p>											
3.	<p>Rate for Hard facing only (maximum 6 mm thick) with suitable electrodes, rate including cost of electrodes (make, size and quantity of electrodes in Kgs utilized is to be certified in the work done certificate)</p> <p style="text-align: right;">Rate per Kg. of electrodes inclusive of cost of electrodes. Rs:</p>											
4.	<p>Reconditioning of S.S Shaft (Under cutting and machining up to 100mm dia).</p> <p style="text-align: right;">Rate per Cm. Rs:</p>											
5.	<p>Cold repairs of shafts, casings, pipes and other fittings by Devcon / Belzona and other compounds per 100 Gr. Usage: including cost of labour</p> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="padding-right: 20px;">a) Devcon</td> <td>Rs:</td> </tr> <tr> <td>b) Belzona</td> <td>Rs:</td> </tr> <tr> <td>c) Titanium putty</td> <td>Rs:</td> </tr> <tr> <td>d) Steel putty</td> <td>Rs:</td> </tr> <tr> <td>e) Over coat putty</td> <td>Rs:</td> </tr> </table>	a) Devcon	Rs:	b) Belzona	Rs:	c) Titanium putty	Rs:	d) Steel putty	Rs:	e) Over coat putty	Rs:	
a) Devcon	Rs:											
b) Belzona	Rs:											
c) Titanium putty	Rs:											
d) Steel putty	Rs:											
e) Over coat putty	Rs:											
6.	<p>Casings and covers, cylinder heads etc., items : Cracks to repair by metal locking with suitable electrodes</p> <p style="text-align: right;">Rate per inch Rs:</p>											

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SCHEDULE III

17 – 01, A.C MOTORS (Stator &Rotor)

1. Uncouple, remove from foundation Dismantling, cleaning, varnishing, backing and improving insulation, renewal of ball bearings if required (Brgs ship’s supply). If required, end covers to built up & machine (cost extra) the bearing landing areas or sleeves (cost extra) to be made and shrunk fitted. Re-assembled, fitted back, coupled, aligned with pump and satisfactory trials to be given. Insulation readings before & after the work to the given.
2. Extra charges for taking to workshop & Back to Vessel including loading, unloading and transportation etc.,
3. Removal of Motor, Refitting/ replace with Overhauled motor, proper Alignment with Pump and to give running/ Load Trails = **35% of Item No. 1 above.**

Description	Firm Rate			
	Rate per Motor (Rs:)			
	Item 1	Item 2		
1000 KW				
600 KW				
400 KW				
300 KW				
150KW				
125KW				
75KW				
55KW				
50KW				
45KW				
30KW				

For class “F” insulation and above = Add 20% cost extra on Sl no.1 above.

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17 – 01 , A.C MOTORS (Stator &Rotor)

1. Uncouple, remove from foundation Dismantling, cleaning, varnishing, backing and improving insulation, renewal of ball bearings if required (Brgs ship's supply). If required, end covers to built up & machine (cost extra) the bearing landing areas or sleeves (cost extra) to be made and shrunk fitted. Re-assembled, fitted back, coupled, aligned with pump and satisfactory trials to be given. Insulation readings before & after the work to the given.
2. Extra charges for taking to workshop & Back to Vessel including loading, unloading and transportation etc.,
3. Removal of Motor, Refitting/ replace with Overhauled motor, proper Alignment with Pump and to give running/ Load Trails = 35% of Item No. 1 above.

Description	Firm Rates Rs.		
	Item 1	Item 2	Item 3
25kw			
20kw			
10kw			
5kw			
3kw			

1- REWINDING (STRIP / CORE) CHARGES PER KW

2- TRANSPORTATION from Vessel to Work shop & Back

Description	Stator (Rs:)		Rotor (Rs:)	
	Item 1	Item 2	Item 1	Item 2
Upto 3 kw				
Upto 10 kw				
Above 10 to 30 kw				
Above 30 Kw				

For class "F" insulation and above = Add 20% cost extra on Sl no.1 above & for Rewinding.

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17 – 01, A.C GENERATORS (Stator & Rotor)

1. Repairs to slip rings: - Transportation of rotor to works, skimming and machining of slip rings, position, adjustment of bushes and bedding. Slip rings if required to be renewed (ship supply), subject to satisfactory Trials. (Alignment with equipment before Trials) the bearings landing area in the end covers to be built up (cost extra) and machine (cost extra) if required or sleeve to be made (cost extra) and shrunk fitted.

Description	Firm Rates Rs.
1000 KW	
600KW	
150KW	
125KW	
75KW	
55KW	
50KW	
45KW	
30KW	
25KW	
20KW	
15KW	
10KW	
5KW	
3KW	
and below	

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18 – 01, DC GENERATORS / MOTORS

1. Uncoupling, dismantling, cleaning field and armature winding varnishing and baking to improve the insulation, bedding comutator and assembling the motor. Bearings to renew (ship supply) if required. Adjustment of the rotor position and bedding of brushes in situ on board and satisfactory Trials. Insulation readings before & after the work to the given.
2. Removing the motor from place, transportation to workshop & Back to Vessel including loading, unloading and transportation etc.,
3. Rewinding of field coils (strip / core) :
4. Repairs to commutator involving dismantling, removal, machining, undercutting, refitting in shaft, bedding of brushes and adjusting positions.

	1.8 KW Rs.	17 KW Rs.	42.5KW Rs.	104KW Rs.	124KW Rs.	150KW Rs.	490KW Rs.	790KW Rs.	1075KW Rs.
1.									
2.									
3.									
4.									

Rewinding (strip / core) charges of armature per KW	Firm Rate
Up to 10 KW	Rs:
Above 10-30 KW	Rs:
Above 30 KW	Rs:

Note: Insulation Class “F” 20% cost extra on sl no.1 above & re-winding.

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19 – 01, ALTERNATORS

1. Cleaning of Stator and Rotor after drawing out Rotor, baking, varnishing and improving insulation insitu on board and Reassembling in position. It includes machining of the slip rings (cost extra) and bedding of the brushes if necessary. End covers to built up & machine (at cost extra) the bearing landing areas or sleeves (cost extra) to be made and shrunk fitted If required.
(Rates to be quoted in the Table given below)
2. Uncoupling, removing the rotor, dismantling the slip ring assembly from the rotor, Machining, Skimming the slip rings, reassemble back and insulating various segments inclusive of to and fro transportation.
3. Removing the alternator from Engine room to workshop and back. **(55% of Sl. No. 1)**

SL. NO	KVA	5 - 9	10-14	15-19	20-29	30	80	100	150	175	240	
1.	FIRM Rs:											
2.	FIRM Rs:											
3.	FIRM Rs:	55% of Sl. No. 1										

SL. NO	KVA	375	400	500	525	550	575	600				
1.	FIRM Rs:											
2.	FIRM Rs:											
3.	FIRM Rs:	55% of Sl. No. 1										

4. Rewinding Charges PER KVA		Firm Rate (Rs.)
a) For Stator upto 10 KVA		
Above 10 KVA – 30 KVA		
Above 30 KVA		
b) For Rotor up to 10 KVA		
Above 10 KVA – 30 KVA		
Above 30 KVA		

All Alternators class “F” and above rewinding job and insulation improving works will be 20% cost extra on Sl. No. 1 above and for re-winding (sl no.4) above.

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20 – 01, ALL TYPES OF COUPLINGS

S.No	Description	FIRM RATE Rs.
A.	<p><u>Mechanical Couplings:</u> <u>For all pumps including Jet Pumps</u></p> <p>Removing the couplings from Motor & Pump with Pullies.</p> <p>Building up (cost extra), machining the claws and internal dia. Tapping and threading for lock bolts.</p> <p>Fitting on the shafts, aligning and satisfactory Trials.</p> <p>Coupling guard to fit</p> <p>Renewal of complete coupling set Rs:</p> <p>(Supply of new coupling at cost extra)</p>	
B.	<p><u>Pneumo-Flex Couplings: (Main Engine & Dredge Pumps Etc.)</u></p> <p>Disconnecting pneumatic pipe lines and ancillary items.</p> <p>Removal of complete coupling from the place</p> <p>Dismantling – renewing the worn out parts, brake friction pads and seals, O’ rings etc.</p> <p>Fitting in place and connecting to the drives.</p> <p>Checking alignment</p> <p>Satisfactory Trials give Rs:</p> <p>(All Spares, Fixing glue Ship supply for above A & B)</p>	
C.	<p>Renewal of complete coupling assembly Rs:</p> <p>(Spare over hauled unit)</p>	

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21 – 01 HYDRAULIC WINCHES & GEAR BOXES

S.NO	Description	FIRM RATE Rs
A)	<p><u>Hydraulic Winches:</u> (Staffa / hytop / hydrowega)</p> <p>i) Hydraulic lines to remove and blank. Complete Winch Motor to remove and dismantle. Clutch plate assembly / pistons and crank shaft etc. Defective parts, seals to renew, assembled Winch Motor to fit in place and satisfactory trials to be given. Couple Winch Motor assembly to renew Winch Drum Bearings / Shaft to renew. (All Spares Ship supply) (Cost of metal built up, machining and sleeves - extra)</p> <p>ii) Hydraulic motor overhauling Service Kit (Staffa / hytop / hydrowega)</p>	
B)	<p><u>Gear Boxes:</u> (Renk / lohman + stolt / craajeveld)</p> <p>L.O Pipe lines & drive shaft to isolate, oil to drain. Top cover to remove, along with accessories. Gear Train inspection and defective gears to renew / polish as per surveyors recommendations. Bushes / Bearings (ship supply) to renew, Crank case to clean before assembly. Fresh oil to take and satisfactory Trials to give (All Spares Ship supply)</p> <p>(Cost of metal built up, machining and sleeves-extra)</p>	

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22 – 01, SAND PUMP AND JET PUMP SUCTION AND DISCHARGE PIPES

Firm Rate Rs:			
SL. NO.	Description	300-599 mm	600-1000 mm
1.	<p>a) Wasted pipes (dia 300– 1000 mm) to be cropped and renewed with new pipe as required. Pipes to be boxed back with new ship supply gaskets. ((If required, after removal of Suction / Disc Pipe from position) (Extra- Cost of Removal & Refit of Pipe as per SI No-3 below)) Rate per KG of Pipe, inclusive of staging – Rs.</p> <p>b) Renewal with existing / New flange (Rate per Kg. of Flange weight), (Cost of Flange Extra) Rs.</p>		
2.	<p>a. Cropping & Renewing pipe in situ (part renewal) Rate per Kg. of renewal insitu – Rs:</p> <p>b. Fitment of doublers Rate per Kg. – Rs: (Staging-5%, Extra for 2a & 2b above)</p>		
3.	<p>Removal & refit of pipe from the place (also applicable for SI no-1 above)/ Remove Pipe, Turn to 180 degrees and fit back in position. (including staging) Rate per meter – Rs:</p>		
4.	<p>Fabrication of straight and bend pipe including cost of material and supply at on board Dredger / at Project Office as per instruction of DCI. (If required Cost of old pipe Removal & Refit of new Pipe as per SI No-3 above will be added)</p> <p style="text-align: right;">a. For straight pipe - Rate per Kg. Rs:</p> <p style="text-align: right;">b. For bend pipe - Rate per Kg. Rs:</p>		

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22 – 01, SAND PUMP AND JET PUMP SUCTION AND DISCHARGE PIPES

SL. NO.	Description	Firm Rate Rs:	
		300-599 mm	600-1000 mm
5.	Manufacture and supply of the pipe flange (including machining, drilling of holes etc). Rate per Kg. of finished weight Rs:		
6.	UT Gauge readings to be taken as per instructions and submit the report in triplicate on board vessel.		
	a) 1 to 100 points	Rate per point	Rs:
	b) 101 to 500 points	Rate per point	Rs:
	c) 501 and above	Rate per point	Rs:

Note: All pipe & flange material will be of MS and conforming to Lloyds ‘A’ grade steel.

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23 – 01, ELECTRICAL MISCELLANEOUS WORKS

SL No	Description	Rate per running meter FIRM Armored cable Rs.												
1.	Renewing cable from switch board to different circuits including cable cost for laying and securing (inclusive of removal of existing cable & necessary obstacles If any)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a) 3 core</td> <td>5 amp</td> </tr> <tr> <td>b) 3 core</td> <td>15 amps</td> </tr> <tr> <td>c) 3 core</td> <td>25 amps</td> </tr> <tr> <td>d) 3 core</td> <td>50 amps</td> </tr> <tr> <td>e) 3 core</td> <td>65 amps</td> </tr> <tr> <td>f) 3 core</td> <td>100 amps</td> </tr> </table>	a) 3 core	5 amp	b) 3 core	15 amps	c) 3 core	25 amps	d) 3 core	50 amps	e) 3 core	65 amps	f) 3 core	100 amps
a) 3 core	5 amp													
b) 3 core	15 amps													
c) 3 core	25 amps													
d) 3 core	50 amps													
e) 3 core	65 amps													
f) 3 core	100 amps													
2.	Renewal of plastic conduit / plastic bating (box / pipe)	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%;">a) for</td> <td>20mm dia</td> </tr> <tr> <td>b) for</td> <td>25 mm dia</td> </tr> <tr> <td>c) for</td> <td>37mm dia</td> </tr> <tr> <td>d) for</td> <td>50mm dia</td> </tr> </table>	a) for	20mm dia	b) for	25 mm dia	c) for	37mm dia	d) for	50mm dia				
a) for	20mm dia													
b) for	25 mm dia													
c) for	37mm dia													
d) for	50mm dia													
3.	Charging of emergency hand lamps	Rate per lamp Rs:												
4.	Emergency batteries to be capacity Tested.	Rate per battery Rs:												
5.	<p>a) Reconditioning of 12 V 180 AMP and 24 V 260 AMP battery</p> <p>b) Charging of battery (incl. removal from Ship and handing over back inclusive)</p>													
6.	Overhauling and calibrating (excluding spares)													
	<p>a) Voltmeter</p> <p>b) Ammeter</p> <p>c) Frequency meter</p>													
7	<p>a) Renew Tube light fitting (where no staging is required) Rs.</p> <p>b) Renew Tube light fitting, Cost including staging (where staging is required to access) (Tube light fittings are ship supply) Rs.</p>													

Note: If any item found BER, then only Labour charges towards collection, inspection etc. will be payable, on production of Work done certification of ship staff.

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24 – 01 , AC & Refrigeration Works

SL. NO.	Description	Firm Rate Rs.																																				
1.	<p><u>Refrigerators, Drinking water coolers and domestic Fridges :</u> Removing compressor, cutting the sealing unit, rewinding the stator, overhauling the sealed unit, welding the same and fitting in place:</p> <p>Up to 1/3 HP Up to 1/2 HP Up to 1 HP Up to 2 HP</p>																																					
2.	<p><u>Refrigerators, Water coolers and Domestic Fridge :</u> <u>Pressure testing, gas charging and commissioning :</u></p> <p>Up to 1/3 HP Up to 1/2 HP Up to 1 HP Up to 2 HP</p>																																					
3.	<p><u>Air – Conditioning Plant, Compressors :</u> Scope of work : Dismantling the compressor, check condition of piston & rings, suction and discharge valve reeds, lapping valve plate, changing full set of gasket, cleaning all parts, boxing back compressor, charging with fresh oil and Freon-12 / Mafron-22, testing for efficiency on board (excluding the cost of Spares, Oil, Gases, materials and machining)</p> <p>Up to 5 HP Up to 10 HP Up to 25 HP Up to 50 HP Up to 75 HP</p>																																					
4.	<p><u>Removing evaporator from Ship, transport to workshop, cleaning of evaporator and refitting on board : (Cost of chemical extra on C+)</u></p> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 30%;">For Domestic fridge</td> <td style="width: 20%;">Up to</td> <td style="width: 20%;">1/2 HP</td> <td style="width: 30%;">Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>1 HP</td> <td>Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>02 HP</td> <td>Rs.</td> </tr> <tr><td colspan="4"> </td></tr> <tr> <td>For A/C Plant</td> <td>Up to</td> <td>5 HP</td> <td>Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>10 HP</td> <td>Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>25 HP</td> <td>Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>50 HP</td> <td>Rs.</td> </tr> <tr> <td></td> <td>Up to</td> <td>75 HP</td> <td>Rs.</td> </tr> </table>	For Domestic fridge	Up to	1/2 HP	Rs.		Up to	1 HP	Rs.		Up to	02 HP	Rs.					For A/C Plant	Up to	5 HP	Rs.		Up to	10 HP	Rs.		Up to	25 HP	Rs.		Up to	50 HP	Rs.		Up to	75 HP	Rs.	
For Domestic fridge	Up to	1/2 HP	Rs.																																			
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	Up to	25 HP	Rs.																																			
	Up to	50 HP	Rs.																																			
	Up to	75 HP	Rs.																																			

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24 – 01, AC & REFRIGERATION WORKS

SL. NO	Description	Firm Rate Rs.
5.	<p><u>Condenser descaling, Domestic Fridge & A/C :</u> Scope of work : Dismantling both the covers, cleaning condenser with cane, testing for leaks under Freon Pressure, Boxing back with new jointing (excluding Cost of chemicals, Gases, materials). Up to 1/2 HP Up to 2 HP Up to 5 HP Up to 10 HP Up to 25 HP Up to 50 HP Up to 75 HP</p>	
6.	<p><u>Pressure testing and Vacuumising :</u> Scope of work: Pressuring the entire system with CO₂ / Nitrogen flushing the same, testing for leaks and rectifying, Vacuumising the plant and keeping the same under vacuum for 12 hours for ensuring that there is no leakage.(Any brazing/soldering & cost of Nitrogen, materials will be extra) Up to 5 HP Up to 10 HP Up to 25 HP Up to 50 HP</p>	
7.	<p><u>System Commissioning :</u> Scope of work: Gas charging the system, starting the plant, cleaning the expansion valve filters, purging the air from the system, adjusting all the control for proper setting, observing the plant and leaving the plant in good working condition (Cost of materials, gases if required will be extra) Up to 5 HP Up to 10 HP Up to 25 HP Up to 50 HP Up to 75 HP</p>	
8.	<p>Supply of skilled Refrigeration / AC Mechanic : per day (8 Hrs Normal) Assistant to Refrigeration / AC Mechanic : per day (8 Hrs Normal) For Mechanic in case of OT hours : per Hour Assistant in case of OT hours : per Hour Note: All above rates are excluding the cost of Spares, Oil, Gases, and materials and machining if any.</p>	

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25 – 01, MAKE & SUPPLY ITEMS
(MS/ SS/ CS/CI/EN/GM/Mn)

SL. NO	Description	Rate per Kg. of Finished product Rs.
	Manufacture and supply on board Vessel :	
1.	Gun metal products	
2.	Brass Products	
3.	GM Impeller	
4.	SS Products	
5.	EN Products	
6.	MS Products	
7.	CI Products	
8.	Cast Steel Products	
9.	Chrome Steel Products	
10.	Manganese Steel Products	
11.	Bronze / Phosphorus Bronze	
12.	Copper	
13.	Nihard Products	
14.	Aluminum Products	
15.	Zinc	

- Note:**
1. The finished product includes all normal operations, however 5% extra will be considered against each operations like– grinding/ honing, keyway milling and threading etc which are considered as precision jobs for each product.
 2. The weight of the finished product should be recorded in Work Done Certificate.
 3. Minimum charges for 5 Kg. will be paid, when finished product(s) weighs together (total quantity of 1 type of finished product) less than 5 Kgs irrespective of number of pieces made of that product. (Min 5 Kg weight is **not applicable for standard bolts** which are readily available in the market, for which actual market rate + 10% is payable)
 4. Payment will be made on prorata basis, if the weight of finished product is more than 5 KG.

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26 – 01 (A)

Besides following items, service centres/providers may submit their competitive rates for other different scope of works.

Annexure

				Rates submitted by Party	Estimate
Sch-II	Basic Port	LSA / FFA ITEMS			
Sch-III					
I	Life Boat	Annual Inspection and Testing			
	a	Open type lifeboat, Davit winch, release hook mechanism etc.			
	b	Enclosed type lifeboat, Davit winch with off-load release hook mechanism			
	c	Enclosed type lifeboat, Davit winch with on-load release hook mechanism			
II		To carry out above job onboard DCI Vessels-			
		Travelling, Lodging & Boarding			
	a	Kolkata, Mumbai, Chennai			
	b	Vizag, Kandla, Mangalore			
	C	Haldia, Paradip, Tuticorin,)			
	d	& other Places			
III		Life Raft			
1		Ration			
2		Id tube			
3		Bk Band			
4		L/R Collect, Transport from NSD/ KPD to w/shop & delivery Back to Vessel (Cost for 1no. or batch)			
5		Co2 recharge up to 300 BAR			
6		SCBA Cyl. collect, Transport frm NSD/KPD to w/shop & Delivery back to Vsl- (Cost for 1no. or batch)			
8		SCBA Cyl. Collet frm Vessel at Haldia, transport to w/shop & Delivery back to Vsl- (Cost for 1no. or batch)			
15		MMD surveyor fee (for any job)		Actual + 10%	

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26 – 01 (B) SERVICING OF LIFE RAFTS

Sl. No.	Description	Firm Rate Rs.
1.	Services:	
	a. Life Raft Basic Servicing	Rate per raft Rs.
	b. Certification (MMD)	Rs.
	c. Transportation – Local:	Rs.
	Out station- Haldia, Paradip, Vizag,	Rs.
	d. Container Painting & Stickers	Rs.
	e. HRU Servicing	Rs.
	f. Pressure testing of Cylinder (if required)	Rs. per Cylinder
	g. CO2 recharging (if required)	Rs. per Kg.
	h. Container Repairs	Rs. per Sq. inch
	i. Life Raft Repairs	Rs. per Sq. inch
2.	Cost of Replacement:	
	a. Parachute Rockets	each Rs.
	b. Smoke Signals	each Rs.
	c. Hand Flares	each Rs.
	d. Emergency Ration (½ Kg.)	each Rs.
	e. Drinking Water (500 ml)	each Rs.
	f. First Aid Kit	each Rs.
	g. Sealing Gasket	each Rs.
	h. Reflective Tape	per foot Rs.
	i. Sea cells	each Rs.
	j. Inflation / Deflation valve	each Rs.

Note: Life rafts are to be serviced and placed back on board vessel within the schedule time along with the certificates endorsed by the MMD.

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26 – 01 (B) SERVICING OF LIFE RAFTS

S.No.	26-01 SERVICING OF LIFERAFTS	UNIT/Each	
	Description		
1	Anti mould Treatment		Per Raft
2	Live Inflation Test of Liferrafts		Per Raft
3	Ship's Name Stencilling on the Raft		Per Raft
4	Floor Seam Test		Per Raft
5	Necessary Additional Pressure Test		Per Raft
	Replacements/ Repairs / Renewals		
6	Emergency pack tape		
7	Fishing Line with Hooks		
8	Heliograph		
9	High Pressure Hose		
10	Holding Strap on Cradle		
11	Canopy Light (Inner)		
12	Canopy Light (Outer)		
13	Container Nylon Band Renewal		
14	Container Nylon Band Weak Link		
15	CO2 Cylinder for 10 Persons		
16	CO2 Cylinder for 12 Persons		
17	CO2 Cylinder for 15 Persons		
18	CO2 Cylinder for 20 Persons		
19	Drinking Vessel		
20	Emergency Pack Drum / Box / Bag		
21	Anti Sea Sickness Tablets		
22	Bailer		
23	Bellow		
24	CO2 Cylinder Inlet Valve - Renewal		
25	CO2 Cylinder Inlet Valve - Repairs		
26	CO2 Pocket Renewal		
27	High Pressure Hose "T" Connection		
28	High Pressure Hose "Y" Connection		
29	Instruction Card		
30	Life line		
31	Leak Stopper		
32	Neoprene Doubler for Painter Opening		
33	Operating Head Renewal		
34	Operating Head Sponge Cover Renewal		
35	Painter Cord (36 m)		
36	Painter Flap (Buford Type)		
37	Paddles		
38	Polythene Liner		
39	Rescue Signal Card		
40	Torch Bulb		
41	Torch Cells		

42	Thermal Protective Aid		
43	Valise		
44	Whistle		
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	26-01 SERVICING OF LIFERAFTS	UNIT/Each	
45	Knife		
46	Knife Pocket		
47	Sea Anchor (as per 83 convention)		
	A. Over 10 Men		
	B. Below 10 Men		
48	Sea Sickness Bags		
49	Sponges		
50	Sea Cell Plug		
51	Seal Strip		
52	Sponge Seal (Gasket)		
53	Sea Cell Pocket Renewal		
54	Torch		
55	Rescue line with Quoit		
56	Repair Kit		
57	Rain Water Collectors		
58	Radar Reflector		
59	Radar Reflector Fitting Arrangement		
60	HRU Diaphragm		
61	HRU Spring		
62	HRU Plastic Guard		
63	HRU "D" Ring		
64	HRU Shackle		
65	HRU Sen house Slip		
66	Weak Link (Complete)		
67	HRU Fitting Charges		
68	Nylon Security Belt for Liferafts – MTR		
69	New Hydrostatic release unit		
70	Water Pocket for Liferaft		
71	Operating Head Servicing		
72	Anti-wick Treatment on painter cord		
73	Brusting strips on container		
74	CO2 Cylinder painting & stencilling		
75	Relief Valve		
76	Relief Valve Repair		
77	Repair Kit Solution Tube		
78	Repair Kit Brush		
79	Repair Kit Emery Cloth		
80	Liferafts Dry cell		
81	Instruction for various Emergency Items		
82	Inflation / Deflation Plug		

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**27 – 01, CO2 CYLINDERS & FIRE EXTINGUISHERS
(Through only MMD approved workshops)**

SL. NO.	Description	Firm Rate Rs.
1.	Fixed CO ₂ .: Remove Cyl, Check weight and refill gas (cost extra), certify correct gas weight in each Cylinder of 45 KG capacity (Minimum charge as per sl no.2 below is payable) a) if Vessel berthed alongside b) If Vessel in Anchorage	Rate per Cyl Rate per Cyl
2	Minimum charges to carryout work onboard,(for Sl No-1 above) if Vessel has less than 30 Cyl. (Lumsum rate) : (Only ONE Cost at Sl no 1 or Sl no.2)	Min Total Rate/ Batch
3	Transportation of Equipments to & from W/shop/Docks, for commencement of works and completion of work onboard Ship.	Lump sum Rs.
4.	a) Refilling of CO ₂ Cyl at filling station (disconnection of Cylinders from ship, shifting out of ship and transport to filling station and refit back onboard etc.) , Cyl of 45 KG capacity b) Hydraulic Test of Cyl. of 45 KG capacity	Rate per Cyl Rate per Cyl
5	For Out station Jobs (to and fro transportation fare for one Engineer and Two skilled persons out station Allowance for Staff)	Lumpsum Rate per Batch
	Hydro Pressure (LP) Testing complete Lines of Co ₂ System. Lumpsum Rate. Hydro Pressure(HP) Testing complete Lines of Co ₂ System. Lumpsum Rate. Hydro Pressure Testing Lines (LP/HP) (Cost for ONE/Single line/ Servicing of Relief Valve etc.) (LP=150 BAR, HP= 151 BAR & Above)	Rs.
6	Servicing of Portable Liquid/ DCP Fire extinguishers : (Empty, clean, Pressure test, Paint and certification of the condition by MMD surveyor) a) (Excluding the Cost of charge chemical, which to be provided by ship) for 9 Ltrs Cap. Type for 45 Ltrs Cap. Type b) (Including the Cost of refill/ charge chemical, which to be provided by W/shop). for 9 Ltrs Cap. Type for 45 Ltrs Cap. Type	Rate per Cyl. Rate per Cyl. Rate per Cyl. Rate per Cyl.
7	<u>Breathing apparatus:</u> a) Service of SCBA/EEBD Bottles including weighthment. Rs. b) Pressure test Bottle including Valve Rs. c) Refill to its Capacity d) Servicing of Face Mask Set	
8	<u>Calibration :</u> a) Pressure gauges - upto 100 BAR/ b) Pressure gauges upto 101 to 500 BAR c) Calibration of Temperature gauges/ Amp Meter/KW meter etc. - for 1 No. d) Calibration of IOPP/Oil content meter/Bilge Oil separator etc.	

Note: Tariff/Rates against Additional items may also submit by party, which will be examined by DCI.

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28 – 01, ALL GANTRIES

SL. NO.	Description	Firm Rate Rs.
1.	<p><u>DRAG HEAD AND INTERMEDIATE GANTRIES</u></p> <p>1. Gantry heel pins to be renewed with ship supply spares. Rate per pin: 2. Bush to renew (Ship supply) Rate per Bush Rs: 3. Manufacturing of gantry heel pins size 170mm dia 257mm long out of C-35 material with greasing provision as per sample. Rate per pin:</p>	As per 25.01
2.	<p><u>SUCTION TUBE ON DECK</u></p> <p>1. a) Dismantle/Removing the turning gland from pipes/ position and dismantling the turning gland. Thoroughly cleaned, overhauled and fitted back with new “L” ring. “L” ring & Spares ship supply. Rate for O/H: b) Turning gland flange (two halves) internal surface to be built up and Machined to size (Metal built up Cost Extra as per 16.01 rates) Rate per flange Set machining (2 half): Rs. 2. Renewal of rubber bellow 700-1000mm dia Rate per bellow: 3. Renewal of Jet hose 300 to 350mm dia a) Long Rate per Hose: b) Short Rate per Hose: 4. Overhauling of complete Gimble ring assembly, including dismantle & assy of 2 fork arms pipes and its Pins & bushes (Spares Ship supply) Rate per Gimble ring complete Assy: 5. Removal & refitting the One Fork Arms Pipe, incl its Pins & bushes (Spares Ship supply) Rate per Arm:</p>	
3.	<p><u>SUCTION BEND GANTRY</u></p> <p>1. Overhauling / renewal of gantry heel pin and gantry top pins / bushes with proper greasing arrangements Rs: 2. Rate for overhauling complete Gantry with ship supply pins / bushes. Rs: 3. Rate for only renewal of one pin & two bushes. (1 set) Rs:</p>	

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29 – 01, TANK CLEANING

SL. NO	Description	FW Tank Rs.	Decantation Tank Rs.	Central Keelson Space Rs.	
I.	<p><u>F.W / BALLAST TANKS/ DECANTATION/BUFFER TANKS/CENTRAL KEELSON</u></p> <p>a) Clearing Mud / Muck & Disposing to shore / Hopper Rate Per Ton of Material Removed (Min. 10 Tons payable)</p> <p>b) Chipping, scrapping & cleaning of Tank. 1. Rate Per Ton of Tank Capacity 2. Rate Per Square Meter of Tank Area</p> <p>c) Cement Washing 2 coats with Cost of materials. 1. Rate Per Ton of Tank Capacity 2. Rate Per Square Meter of Tank Area</p>				<p>(Min.10 Tons payable)</p> <p>b) 1) = Rs.----- (Min.10 T payable) b) 2) = Rs.----- (Min.10 mtrs Sq payable)</p> <p>c) 1) = Rs.----- (Min.10 T payable) c) 2) = Rs--- (Min.10 mtrs Sq payable)</p>
II.	<p><u>FO / LO TANKS</u></p> <p>a) Clearing of Fuel Oil, Lub Oil, Sludge etc from tank to shore bins 1) Rate per ton of material removed Rs:</p> <p>b) Cleaning and moping dry with cloth 1. Rate Per Square Meter of Tank Area</p> <p align="right">Note: Charges for gas free certificate =</p>				<p>a) 1) = Rs.--- (Min.10 T payable)</p> <p>b) 1) = Rs---- (Min.10 mtrs Sq payable)</p> <p>Actual charges paid to Inspector plus 10% extra. (Fixed)</p>
III.	<p>BILGES IN E/R & P/R :</p> <p>a) Clearing of Mud, Muck, Oil sledge, and Removal of Oil Rate per ton of material removed Rs:</p> <p>b) Scrapping / Cleaning Rate per sq. meter Rs:</p>				<p align="center">--</p> <p>(Min.10 Tons payable)</p> <p>b) 2) = Rs.----- (Min.10 mtrs Sq payable)</p>

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30 – 01, ELECTRONIC EQUIPMENT
GENERAL TERMS AND CONDITIONS FOR AWARD OF REPAIR WORKS OF NAVIGATIONAL -
COMMUNICATION – DREDGING - CONTROL SYSTEMS – PLC - DRIVES - PNEUMATIC
EQUIPMENT – STPI- STPM- MEASURING INSTRUMENTS – SAFETY SYSTEMS -
CALIBRATION

SCHEDULE-I

I. FOR LOCAL REPAIR WORKS

1. All Public Holidays and Sundays are considered as Holidays.
2. Engineer Man-Hours over and above the normal working hours (i.e. 0900 to 1700 hrs) will be considered as Over Time. Normal working hours of 8 hrs on board vessel.
3. Payment will be made on Pro-Rate basis, if the engineer working hours are less than eight hours.
4. Name of the Engineer attended is to be recorded in the service report.
5. Repair firm should carry minimum spare parts required for the job along with the Engineer.

II. FOR OUTSTATION REPAIRS

1. Travel by Air or 2-Tier / 3-Tier A.C will be paid at actuals on production of Air Ticket & Boarding pass (or) Rail Ticket / PNR number in case of Train journey.
2. Twenty-Four Hours is considered as one day. Part thereof will be paid on Pro-Rata basis. Engineer working days will be counted from the time engineer leaves the place of service station till he returns back to the place of service station. No other charges viz., idle time / travel time and over time charges are applicable.
3. Lodging and Boarding charges will be paid for the number of days stayed at out station.

III. CERTIFICATION

1. Service report / work done certificates for the works carried out by the firm shall be incorporated with details viz., name of the engineer(s) attending, date & time when the service engineer leaves his service station and when the service engineer returns (or is expected to return) back to his service station, details of the spares / materials with quantity consumed from the firm's stock / ship's stock, details of overtime hours (if any). The service reports shall be made day-wise duly indicating time for the works carried out by the engineer(s) on each day.

IV. AWARD OF WORK

1. The Corporation reserves the right to allot / reject the work to any Registered Repair Firm of DCI without assigning any reasons.

V. INDICATE PLACE OF SERVICE STATIONS IN INDIA FOR WHICH THE QUOTED TARAIF IS APPLICABLE. THESE SERVICE STATIONS ARE TREATED AS LOCAL SERVICE CENTRES FOR REPAIR WORKS.

Sl.no	PLACE OF PORT	TELEPHONE	TELEFAX	E-MAIL	CONTRACT PERSON
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					

VI. DETAILS OF SERVICES

PROPRIETARY SERVICES				
EQUIPMENT	MAKE	MODELS	AUTHORISATION BY	VALIDITY
PROVIDING SERVICES OTHER THAN PROPRIETARY				
EQUIPMENT	MAKE	YEARS OF EXPERIENCE	ATTACH - PROOF OF EXPERIENCE (YES/NO)	OTHER INFORMATION IF ANY

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**30 – 01 ELECTRONIC EQUIPMENT
(Including STPI, STPM, Pneumatics Etc.)
SERVICE TARIFF**

SCHEDULE – II

S.NO	Description	Designated Engineers	Technician	Designated Engineers	Technicians
I	Section – A (Local Works)				
1.1	Normal Day (8 hrs)		70% of Engr rate		
1.2	Holidays & Sundays (8 hrs)		-do-		
1.3	Over Time Per Hour		-do-		
1.4	Local Conveyance (To & Fro) Per Trip		-do-		
II	Section – B (Out Station Works)				
2.1	Normal Day		-do-		
2.2	Holidays & Sundays		-do-		
2.3	Lodging & Boarding and Local Conveyance (To & Fro)				
2.3.1	Haldia				
2.3.2	Kolkata				
2.3.3	Paradip				
2.3.4	Goa				
2.3.5	Mangalore				
2.3.6	Kochi				
2.3.7	Kandla				
2.3.8	Mumbai				
2.3.9	Vizag				
2.3.10	Chennai				
2.3.11	Nagapattinam				
2.3.12	Rameswaram				
2.3.13	Tuticorin				
2.3.14	Ennore				
2.3.15	Karwar				
III	To & Fro Traveling Charges: (Taxi) per engineer / group of engineers				
3.1	Kolkata / Karagpur – Haldia				
3.2	Bhubaneswar / Cuttak - Paradip				
3.3	Bhuz – Kandla				
3.4	Chennai- Ennore				
3.5					

3.6	Nagapattinam - Vedaranyam				
3.7	Madurai - Rameswaram				
3.8	Mangalore / Goa - Karwar				
3.9	Other Railway / Air Station – Port Area				

IV	SECTION.C					
4.1	Gyro Overhauling		WITH LIQUID		WITHOUT LIQUID	
		MAKE	MODE L			
	A	SPERRY MARINE / NGSM	SR- 220			
	B	SPERRY MARINE / NGSM	SR-180			
	C	SPERRY MARINE / NGSM	NAVIG ATE X MK-I/MK-II			
	D	ANSCHUTZ	STD-20/22			
	E	YOKOGAWA	MOD-700/900			
	F	OTHERS				
4.2	Servicing of SART at Work shop for MMD / IRS Certification		WITH BATTERY		WITHOUT BATTERY	
	A	Painswessex / McMurdo	RT-9			
	B	Nova Marine	RT-900			
	C	ACR	Pathfinder-III			
D	OTHERS					
4.3	Servicing of EPIRB at work shop for MMD / IRS Certification		WITH BATTERY		WITHOUT BATTERY	
	A	McMurdo	Sailor-406/E3			
	B	Nova Marine	RT 260M			
C	ACR	RLB-27/2756				

	D	Samyung	SEP-406				
	E	OTHERS					
4.4	Calibration of Magnetic Compass						
	A	Swinging of Compass and issuing certificate					
	B	Cost of Magnet					
4.5	IRS Radio Survey Charges						
	A	Lump sum charges for conducting Safety Radio Survey till completion					
		Authorised surveyor Charges per Day		The charges shall be as per SECTION A&B of SCHEDULE.II			
	B	Testing & Certification of EPIRB on board by Authorised surveyor and IRS Certification (To arrange IRS visit on-board by DCI)					
	C	Testing & Certification of SART on board by Authorised surveyor and IRS Certification (To arrange IRS visit on-board by DCI)					
	D	Testing & Certification of AIS on board by Authorised surveyor and IRS Certification (To arrange IRS visit on-board by DCI)					
4.6	A	SVDR Annual Performance Test (APT) & certification by OEM Make: Headway,china Model: HMT- 100					
	B	VDR Annual Performance Test (APT) & certification by OEM Make: Consilium Model: L3HRV02					
4.7	Collection & delivery of EPIRB / SART / SVDR Capsule onboard per trip						
	A	Local					

	B	Outstation		
4.8	Servicing of Systems including all accessories		(Service Charges Only, Spares Extra)	
4.8.1	A	Suction Tube Position Indicator (STPI) Pneumatically operated		
	B	Suction Tube Position Monitor (STPM) Electronically Operated		
	C	Draft & Load Monitor (DLM) Electronically Operated		
	D	Hopper Volume Level Measurement (HVLM) Electronically Operated		
	E	Density & Velocity Production meter Electronically Operated		
4.8.2	A	Dual Axis Doppler Speed Log (Water)		
	B	Dual Axis Doppler Speed Log (Satellite)		
	C	DGPS		
	D	RADAR		
	E	GYRO COMPASS		
	F	ECHO SOUNDER		
	G	AUTO-PILOT		
4.8.3	A	SIEMENS PLC S7-300/S7-400 with 196 I/Os – Hydraulic Installations		
		SIEMENS PLC S7-300 with 32 I/Os – Main Switch Board		
	B	Allen Bradley PLC SLC-500 with 196 I/Os – Hydraulic Installations for Dredge -15/16/17		
	C	ABB Remote Control Systems RCS-800 for Dredge - 12&14		
	D			

OTE: The services other than the place of service station listed in SCHEDULE.I will be eligible for travel, lodging & Boarding as OUT-STATION as per SECTION-B OF SCHEDULE.II for the above works listed at 4.1, 4.2, 4.3, 4.4, 4.5, 4.6, 4.8 of SECTION.C

V	Supply of essential parts			
5.1	HRU for EPIRB			
	A	McMurdo E5		
	B	Sailor406 E3		
	C	Nova Marine RT 260 M		
	D	ACR RLB-27/2756		
5.2	A	HRU for SVDR (Headway) Capsule SEP-406		
	B	HRU for VDR (Consilium) Capsule L3HRV02		
	C			
5.3	LITHIUM BATTERIES FOR SVDR & VDR			
	A	SVDR Headway Capsule SEP 406		
	B	SVDR Headway System Mains backup		
	C	VDR Consilium Capsule L3HRV02		
	D	VDR Consilium system Mains back up		
5.4	Two Way RT LITHIUM SEALED battery (GMDSS)			
	A	ACR 2726A		
	B	SAILOR SP 3520		
	C	NAVICO AXIS 150		

	D	McMurdo R1		
5.5		Coaxial cable RG 62 for HVLM Multiranger	-----/ Mtr	
5.6		GPS Antenna cable RG 213 for 30 meters		
5.7		Buffer amplifier for serial communication RS 232 / 422 (6 to 8 port)	-----/ Mtr	
5.8		VHF / MF-HF/ Antenna CO-AXIAL cable for 30 meter		
5.9		Moving coil panel meters of 96x96mm dial, 0/4-20mA (or) 0-5/10/24 V. DC input signal for any Process parameters		
	A	Analog		
	B	Digital		
VI	Repairs & Calibration of meters/measuring instruments – CHARGES PER UNIT TO BE QUOTED			
6.1	CALIBRATION DETAILS			
	A	Calibration of Panel meters moving coil 4-20mA/0-10Amps		
	B	Repairs to Transmitters/ amplifiers for single conditioning of process parameters Viz., density/ velocity/ vacuum/ pressure/ level/ temp. / speed/ etc.,		
	C	Calibration of Transmitters /amplifiers for single conditioning of process parameters Viz., density/ velocity/ vacuum/ pressure/ level/ temp. / speed/ etc.,		
	D	Complete loop calibration including sensor, transmitter, indicator		
	E	Calibration of electrical measuring indicators Viz., Voltage, Ampere, Watt, Phase, etc.,		
NOTE: The services other than the place of service station listed in SCHEDULE.I will be eligible for travel, lodging & Boarding as OUT-STATION as per SECTION-B OF SCHEDULE.II for the above works listed at 6.1 of SECTION.C				

VII		Repairs to Printed Circuit Boards of Control & Monitoring Systems at Work Shop				
7.1	A	DLM type IHC Minisys Input/Out board IHC 4050				
	B	DLM type IHC Minisys Processor board IHC 4040				
	C	IHC/SIEMENS - Signal Conditioner type Multi Ranger for Hopper level measurement				
	D	IHC-Pressure Transducer				
7.2	A	THALES DGPS model Aquarius 01/02 Processor Board				
	B	THALES DGPS model Aquarius 01/02 IO board				
	C	THALES DGPS model Aquarius 01/02 MF/HF board				
7.3	A	MV amplifier for analog signal amplification				
	B	SPRINTER level sensor				
7.4	A	IHC-STPM Angle Transmitter				
	B	IHC-STPM Pendulum Transmitter				
	C	IHC-STPM PSU PCB				
	D	IHC-DLM/STPM TYPE MINISYS PSU +/- 12V				
	E	IHC-DLM/STPM TYPE MINISYS PSU 24V				
	F	IHC-DLM/STPM TYPE MINISYS PSU +/- 15V				
VIII		Development of Printed Circuit Boards				
8.1	DLM SYSTEM					
	A	Input / Output Board				
	B	Microprocessor Board				
	C	Mother Board				
IX		Supply of essential spares by Original Equipment Manufacturer/ Authorised service Provider				
9.1	Description of Equipment SPARE PART		New	Refurbished	New	Refurbished
	A					
	B					
	C					
	D					
	E					
	F					
	G					
	H					

	I					
	J					
Instructions to repair firms						
1	OEM authorization letter to be enclosed for proprietary firms					
2	OEM authorized work shop / OEM service firms can quote the parts as an Annexure.					
3	IRS authorization letter to be produced for the works at Item. No 2, 3 & 5 of III / Section-C					
4	Any remarks on the work done certificate shall be cleared by repair firm prior submitting the invoice for payment					
5	MMD / IRS fee will be paid at actuals on production of proof stated for Item No. 2 & 3 of III / Section-C					
6	Cost of the Materials incorporated in the work as reflected in the work done Certificate, if any purchase made above Rs. 10,000/- (Rupees Ten thousand only) value connected in each item, supporting copy of vouchers / bills must be enclosed for material incorporated in the work					

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SERVICES TARIFF & SPARES COST

Approved Rates

<u>A:- SUPPLY OF SPARES FOR PNEUMATIC SUCTION TUBE INDICATORS SYSTEM.</u>				
Sl.No	Description of Material		DCI Approved Rate	
			in Rs.	
1	Pneumerstat Control Unit Major repair kit / each			
2	Blow through & Measuring valve Reaper } kit / each }			
3	Blow through & Measuring Valve Unit / Each			
4	Safety Measuring Unit Major Repair kit			
5	Safety Measuring Unit / each			
6	Measuring Load Indicator Major Repair kit/ each			
7	Reducing Valve (0 - 10 Bar)/ each			
8	Auto Air Filter (0-40 bar)/ each			
9	Auto Air Filter (0- 15 Bar)/ each			
10	Lubricator / each			
11	Reducing Valve (0 - 40 Bar)/ each			
12	P.U.Tube Coil / Each			
13	Brass Fittings / each			
14	Copper Tube Coil / each (18 gauge thickness)			
15	Deck Copper Tube Clamp / each			
16	Plastic Tube Coil (Flexible hose)/ each			
17	Deck Flexible Tube Clamps S.S. / each			
18	Measuring Needle Set / each			
19	Pneumerstat Oil / each			
20	Measuring Indication Board/ each			
21	Ball Valve (size- 1/2")			
22	Moisture Separator (replacement of filter)			

23	Auto Drain with time setting Unit (for Moisture separator or Filter)/ each			
24	Anti choking s.s. Bubbler Unit & Assembly / each			
25	Sea suction Bubbler s.s Valve with Assembly / each			
26	Booster Valve Unit / each			
27	Booster Valve service kit / each			
28	Heavy duty rubber hose / per coil			
29	Quick release coupling unit /each			
30	S.S. Jubilee Clips / each			
31	S.S. Block for heavy duty Rubber Hose / each			
32	Spiral Tube / each coil			
33	cable Tie / each packet			
34	Teflon Tape / each			
35	Indication panel board Glass / each			
36	push type 'L' Bow fittings			
37	push type 'T' Bow fittings/ each			
38	Brass Union Fitting / each			
39	push Type fitting/ each			
40	Direct Actuating Valve Unit /each			
41	Direct Actuating Valve Unit Major Service kit / each			

	<u>NEW INSTALLATION OF COMPLETE PNEUMATIC SUCTION TUBE POSITION INDICATOR SYSTEM (STPI)</u>			-
				-
	Description of Service		DCI Approved rate	
			<i>in Rs.</i>	
A	INSTALLATION CHARGES:-			
1	Installation & Commissioning of			
	Pneumatic - STPI System (One side)			
B.	MATERIAL CHARGES:-			
	a. Packages for Pneumatic STPI System			
	b. Copper Pipes, Clams, Brass Fitting, PVT Tubes, PVC Fittings and Flexible hose Etc.			

	<u>II. NEW INSTALLATION OF ELECTRO - PNEUMATIC SUCTION TUBE POSITION MONITORING (STPM) AND LOGGING SYSTEM</u>				
			-	-	-
			-		
	Description of Service		DCI APPROVED		
			RATE		
	INSTALLATION CHARGES:-				
1	Installation of complete Electro pneumatic STPM System				
	<u>MATERIAL CHARGES:-</u>				
2	Total Packages for Electro - Pneumatic STPM System.				

	<u>III. NEW INSTALLATION OF ELECTRO - PNEUMATIC DRAFT & LOAD INDICATOR MONITORING SYSTEM (DLM)</u>			
			-	-
			-	
	Description of Service		DCI APPROVED	
			RATE	
	<u>INSTALLATION CHARGES:-</u>			
1	Installation of complete Electro Pneumatic DLM System			
	<u>MATERIAL CHARGES:-</u>			
2	Total Packages for Electro - Pneumatic DLM System			

	<u>IV. NEW INSTALLATION ELECTRO PNUMATIC CLUTCH CONTROL SYSTEM</u>				
	Description of Service		DCI APPROVED		
			RATE		
	<u>INSTALLATION CHARGES:-</u>				
1	Installation & Commissioning of complete				
	Electro Pneumatic Clutch control				
	system.				
	<u>MATERIAL CHARGES:-</u>				
2	Electro Pneumatic Clutch Control system.				
3	Pump room to wheel house cabling, Clamps,				
	Bulk head fitting etc.				

	<u>V. NEW INSTALLATION OF PNEUMATIC CHANGE OVER REMOTE CONTROL SYSTEM</u>			
	Description of Service		DCI APPROVED	
			RATE	
	<u>INSTALLATION CHARGES:-</u>			
1	Installation & Commissioning of complete Pneumatic change over Remote control System.			
	<u>MATERIAL CHARGES:-</u>			
2	Pneumatic Change Over Remote control system			
3	Wheel House to Engine Room cabling, Clamps, Bulk head fittings, Copper pipes etc.			

C. SUPPLY OF SPARE MAIN ENGINE REMOTE CONTROL SYSTEM				
Sl. No	Description of Material			DCI Approved Rate
1	Reducing valve (0-40 Bar)/ each			
2	Reducing valve (0-10 Bar)/ each			
3	Auto Air Filter (0 -40 Bar)/each			
4	Auto Air Filter (0 -15 Bar)/each			
5	Air Dryer (20 CFM) / each			
6	Relay Control Unit Service kit/ each			
7	Pressure shut Off Valve unit/ each			
8	Relay Control Unit/ each			
9	Air Line Relief valve / each			
10	Air Line Relief valve service kit/ each			
11	Three Way valve service kit/ each			
12	Multiple change over valve service kit / each			
13	Pressure Transmitter Service kit / each			
14	Double Solenoid valve directional Control valve Unit / each			
15	Double Solenoid valve Directional Control valve service kit/ each			
16	Directional Control Air valve unit / each			
17	Directional control air valve service kit/ each			
18	Servo Positioner Service kit/ each			
19	Servo positioner unit/ each			

20	Single Solenoid valve unit each				
21	Check choke valve unit / each				
22	Check choke valve service kit / each				
23	Flow Regulator valve service kit/ each				
24	Pressure cut off valve service kit / each				
25	Flow Regulator valve unit each				
26	manuoring control valve service kit/ each				
27	change over valve unit				
28	change over valve service kit / each				
29	Pressure set 3- way valve service kit/ each				
30	Shut off valve unit/ each				
31	Shut off valve service kit/ each				
32	Double check valve unit / each				
33	Double check valve service kit / each				
34	Quick release valve unit / each				
35	Quick release valve service kit / each				
36	Pitch setter unit/ each				
37	Pitch setter service kit/ each				
38	Actuator Unit service kit/ each				
39	Engine shut Down valve Unit/ each				
40	E/p Converter / each				
41	Pilot Operated 3/2 way valve unit / each				
42	Shuttle valve unit / each				
43	Pressure control valve unit/ each				
44	Pressure reducing station / each				
45	Pressure sensor for E/P converter/ each				
46	Check valve / each				

47	Actuator Positioner/ each				
48	Task Master unit / each				
49	Main Engine Remote control valve unit/ each				
50	Rotor Air valve/ each				
51	Booster Relay control valve/ each				
52	Flowerage valve / each				
53	Air Dryer 10 CFM)/ each				
54	Copper tube coil/ each coil				
56	P.U Tube for each coil				
57	Heavy duty mix brass fittings /each				
58	Actuator Unit for each				

31 – 01, OEM SERVICES TO SYSTEMS (Page-1)

TERMS AND CONDITIONS FOR AWARD OF REPAIR WORKS BY OEM, FOR FUEL PUMPS, CONTROL SYSTEMS,

I. FOR LOCAL REPAIR WORKS

1. All Public Holidays and Sundays are considered as Holidays.
2. Engineer Man-Hours over and above the normal working hours (i.e. 0900 to 1700 hrs) will be considered as Over Time. Normal working hours of 8 hrs on board vessel.
3. Payment will be made on Pro-Rate basis, if the engineer working hours are less than eight hours.
4. Name of the Engineer attended is to be recorded in the service report.
5. Repair firm should carry minimum spare parts required for the job along with the Engineer.

II. FOR OUTSTATION REPAIRS

1. Travel by Air or 2-Tier / 3- Tier A.C will be paid at actual on production of Air Ticket (or) Ticket number in case of Train Journey.
2. Engineer Man-Hours over and above the normal working hours (i.e. 0900 to 1700 hrs) will be considered as Over Time on board vessel. Normal working hours of 8 hrs on board vessel.
3. Twenty-Four Hours during Travel/ waiting for Boat/ waiting time etc, excluding working Hours onboard the Ship/ Dredger is considered as one day. Part thereof will be paid on Pro-Rata basis. Service Engineer working days will be counted from the time engineer leaves the place of service station till he returns back to the place of service station.
3. Lodging and Boarding charges will be paid for number of days stayed at out station.

III. AWARD OF WORK

1. The Corporation reserves the right to allot / reject the work to any Registered Repair Firm of DCI without assigning any reasons.

IV. INDICATE PLACE OF SERVICE STATIONS IN INDIA FOR WHICH THE QUOTED TARAIF IS APPLICABLE. THESE SERVICE STATIONS ARE TREATED AS LOCAL SERVICE CENTRES FOR REPAIR WORKS.

Sl.no	PLACE	TELEPHONE	TELEFAX	E-MAIL	CONTRACT PERSON
1.					
2.					
3.					
4.					
5.					
6.					

DETAILS OF DREDGING EQUIPMENT ENCLOSED

DCI

Signature and Seal of Repair Firm

31 – 01, OEM SERVICES TO SYSTEMS (Page-2)

Place of basic rates quoted for: **At PORT=**

Name of Equipment = Fuel Pumps of Main Engines/AE

NAME OF OEM =

Service Centre / Provider

S.NO	Description	Designated Engineers	Technicians
		Rs.	Rs.
I	Section – A (Local Works)		
1.	Normal Day (8 hrs)		
2.	Holiday (8 hrs)		
3.	Over Time Per Hour		
4.	Local Conveyance (To & Fro) Per Trip		
II	Section – B (Out Station Works)		
1.	Normal Day		
2.	Holiday & Sunday		
3.	Lodging & Boarding and Local Conveyance (To & Fro)		
	Haldia		
	Kolkata		
	Paradip		
	Goa		
	Mangalore		
	Kochi		
	Kandla		
	Mumbai		
	Vizag		
	Chennai		
4.	To & Fro Traveling Charges: (Taxi)		
	Kolkata / Karagpur – Haldia		
	Bhubaneswar / Cuttak - Paradip		
	Bhuz – Kandla		
	Other Railway / Air Station – Port Area		
III	Section - C		
1.			
2.			
3.			
4.			
5.			

Note: 1) OEM / Maker Authorization letter copy to be produced

2) Tariff/Rates against Additional items which are not covered above may also be submitted by party, which will be examined by DCI.

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32 – 01, OEM SERVICES TO SYSTEMS – HYDRAULICS (Page-2)

Place of basic rates quoted for: **At PORT=**

Name of Equipment = Hydraulic Systems

NAME OF OEM/PRODUCTS =EATON, Vickers.

Service Centre / Provider:

S.NO	Description	Designated Engineers	Technicians
		Rs.	Rs. (70% of Engr rate)
I	Section – A (Local Works)		
1.	Normal Day (8 hrs)		
2.	Holiday (8 hrs)		
3.	Over Time Per Hour		
4.	Local Conveyance (To & Fro) Per Trip		
II	Section – B (Out Station Works)		
1.	Normal Day		70%
2.	Holiday & Sunday		
3.	Lodging & Boarding and Local Conveyance (To & Fro)		
	Haldia		
	Kolkata		
	Paradip		
	Goa		
	Mangalore		
	Kochi		
	Kandla		
	Mumbai		
	Vizag		
	Chennai		
4.	To & Fro Traveling Charges: (Taxi)		
	Kolkata / Karagpur – Haldia		
	Bhubaneswar / Cuttak - Paradip		
	Bhuz – Kandla		
	Other Railway / Air Station – Port Area		
5.	Reconditioning of Drag head Gantry Hydraulic cylinder, Bore Ø250 X Rod Ø125 X 2500 mm Stroke cap eye mounted with rod eye.W.P:220 Bar (Operations- dechroming and rechroming, straitening, polishing, Cyl assembly and pressure test etc., of RAM & Cyl.)		

6.	Reconditioning of intermediate gantry Hydraulic cylinder, Bore Ø250 X Rod Ø125 X 2500 MM Stroke cap eye mounted with rod eye.W.P:220 Bar (Operations- dechroming and Rechroming, straitening, polishing, Cyl assembly and pressure test etc., of RAM & Cyl.)		
7.	Reconditioning of swell compensator hydraulic cylinder, Bore Ø250 X Rod Ø125 X 2000 MM Stroke: Rear Flange mounted with Rod Eye.W.P:220 Bar (Operations- dechroming and rechroming, straitening, polishing, Cyl assembly and pressure test etc., of RAM & Cyl.)		
8.	Reconditioning of bottom door hydraulic cylinder, Bore Ø320 X Rod Ø160 X 1080 MM Stroke Cap eye mounted with Rod Eye.W.P.220 Bar (Operations- dechroming and rechroming, straitening, polishing, Cyl assembly and pressure test etc., of RAM & Cyl.)		
9.	Reconditioning of trunion gantry hydraulic cylinder, Bore Ø200 X Rod Ø100 X 589 MM Stroke trunion mounted.W.P.220 Bar (Operations- dechroming and rechroming, straitening, polishing, Cyl assembly and pressure test etc., of RAM & Cyl.)		

Note: 1) Tariff/Rates against Additional items which are not covered above may also be submitted by party, which will be examined by DCI.

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TECHNICAL BID

(Annexure-II)

RS (2017-18), QUALIFYING CRITERIA TO ENLIST SHIP REPAIR FIRM WITH DCI AS REGISTERED SHIP REPAIR FIRM ARE:

The following documentary evidence must be submitted for qualifying in Technical bids:

- 1) Details of Repair firm's registration certificate as small-scale industry (SSI/ MSME) with Dept. Industries. - (Yes / No)
- 2) Reputed marine workshop/ Service station with skilled workforce and essential infrastructure repair/ service facilities. - (Yes / No)
- 3) Repair firm's PAN, PF, Service Tax/ ST, CST, GST etc. registration- (Yes / No)
- 4) Repair firm's Dock entry permit for Kolkata port/ Haldia port / other Ports- (if available). (Yes / No)
- 5) Repair firm's ISO- 9001/ Standard certificate. –If available - (Yes / No)
- 6) Audited Balance sheet for last 2 years.- (Yes / No)
- 7) New Repair Firms has to submit supporting documents for the past experience works executed on Ships/Dredgers.- (Yes / No)

Check list for Technical Bids

- 1) The documentary evidence for qualifying in Technical bids, as above
- 2) Scheduled items of Repairs- Rate Sch (Expertise items with evidence)
- 3) Cost of tender Rs.6,000/-
- 4) EMD Rs.25,000/-

TECHNICAL BID

(Scheduled items of Repairs- Rate Sch)

All Repair Firms are need to submit supporting documents (work done certificates) for the past experience works executed on Ships/Dredgers and may quote their competitive rates for the Items of Rate schedule for the consideration by DCI and further to incorporate into Rate schedules- (Yes / No). Accordingly, expertise Items of Rate schedule may be marked as (quoted/ not quoted)

The ITEMS OF RATE SCHEDULE

- | | |
|--------------------------------|------------------------------------------------------------|
| 01 – 01 (quoted/ not quoted) = | Decarbonisation / Overhaul of Engines |
| 01 – 02 (quoted/ not quoted) = | Ancillary Repair works for Diesel Engines |
| 02 – 01 (quoted/ not quoted) = | H.E & Coolers for Diesel Engines |
| 03 – 01(quoted/ not quoted) = | Centrifugal Sea Water/ Fresh Water Pumps |
| 04 – 01(quoted/ not quoted) = | Gear pumps |
| 05 – 01(quoted/ not quoted) = | Dredge / Sand Pumps |
| 06 – 01(quoted/ not quoted) = | Jet pumps |
| 07 – 01 (quoted/ not quoted) = | Sea Suction & Discharge Valves |
| 08 – 01 (quoted/ not quoted) = | Hyd. Operated sluice / butterfly valves (Mechanical Works) |
| 09 – 01(quoted/ not quoted) = | Drag Heads repairs |
| 10 – 01(quoted/ not quoted) = | Hydraulic Cylinders. |
| 11 – 01(quoted/ not quoted) = | Wind lasses. |
| 12 – 01(quoted/ not quoted) = | Sheaves & Pulleys |
| 13 – 01(quoted/ not quoted) = | Renewal G.I Pipes |

14 – 01(quoted/ not quoted) =	Renewal of Scheduled/Solid drawn Pipes
15 – 01(quoted/ not quoted) =	Steel Renewals
16 – 01(quoted/ not quoted) =	Metal Building / Reconditions of Heavy items
17 – 01(quoted/ not quoted) =	A.C Motors / Generators
18 – 01(quoted/ not quoted) =	D.C Generators / Motors
19 – 01(quoted/ not quoted) =	Alternators
20 – 01(quoted/ not quoted) =	All types of Couplings
21 – 01(quoted/ not quoted) =	Hydraulic Winches & Gear Boxes.
22 – 01(quoted/ not quoted) =	Sand Pump & Jet Pump, Suction & Discharge Pipes
23 – 01 (quoted/ not quoted) =	Electrical miscellaneous works
24 – 01(quoted/ not quoted) =	A/C & Refrigeration works
25 – 01(quoted/ not quoted) =	Make & Supply items (MS, SS, CS)
26 – 01(A)(quoted/not quoted)=	Servicing of Life Boats
26 – 01(B)(quoted/ not quoted)=	Servicing of Life Rafts
27 – 01(quoted/ not quoted) =	CO ₂ Cylinders & Fire Extinguishers.
28 – 01(quoted/ not quoted) =	All Gantries
29 – 01(quoted/ not quoted) =	Tank Cleaning
30 – 01(quoted/ not quoted) =	Electronic Equipment.
31 – 01(quoted/ not quoted) =	OEM Services for ME Governors/Control systems.
32 – 01(quoted/ not quoted) =	OEM Services for ME/AE Fuel pumps/Control systems

DCI

Signature and Seal of Repair Firm